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THE JOURNAL

OF THE

Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES
ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

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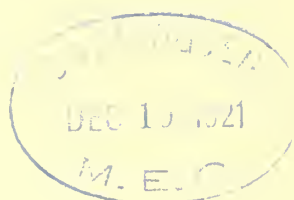
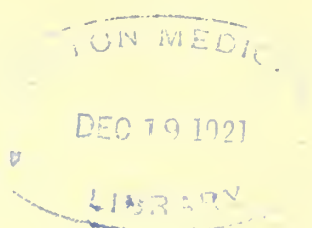
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OFFICE OF PUBLICATION, 3529 PINE STREET, ST. LOUIS, MISSOURI

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JANUARY, 1921, TO DECEMBER, 1921



THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the Missouri State Medical Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

St. Louis, Mo., January, 1921.

NUMBER 1

E. J. GOODWIN, M. D., EDITOR
3529 Pine St., St. Louis, Mo.

PUBLICATION COMMITTEE { W. H. BREUER, M. D., Chairman
S. P. CHILD, M. D.
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ORIGINAL ARTICLES

A PLEA FOR THE ESTABLISHMENT OF A STATE GENERAL HOSPITAL ARTICU- LATED WITH OUR COUNTY GEN- ERAL AND OTHER HOSPITALS, AND THE COMPLETION OF MEDICAL EDUCATION IN THE UNIVERSITY OF MISSOURI*

FRANK G. NIFONG, M.D.

COLUMBIA, MO.

The great war has ended. Reconstruction has begun. Statesmen are striving to solve our great problems of international relationship, as well as to draft our difficult domestic plans. Every vocation, every business, every profession, and every individual, is meeting difficult and unexpected conditions. Our own profession of medicine is being severely tried by changed conditions, almost revolutionary. We need the thought and counsel of our wisest and best men that we may not meet disaster. We need to hold fast our inherited ideals of greatest service to our fellow-men, and withal to perform that service under the high ethical system which has always been peculiarly characteristic of the profession of medicine. The worthy and good things of this world have ever been used as the initial instruments of evil. The medical profession, because of its altruistic service, is the first to be exploited by socialism. The Christian religion is likewise exploited. Very soon, however, the passion of love is replaced by hate, and we have the rule of the proletariat, bolshevism, anarchy. If we permit medicine to be socialized or nationalized we will fail tragically. To you and to me medicine has become the greater part of our lives. Ideal medical service should be our chief aim. My appeal to you is that we hold fast to our high ethical ideals, while of necessity we make

many changes in our methods for better service to humanity.

Now, plainly, it is the light of truth that saves us from pitfalls. What we need is more light, both for ourselves as a profession and for the whole people. It now becomes our duty to give better medical service everywhere; and that we may do this it is necessary to educate both the physicians and the people. Modern medicine and the idea of hospital service are now inseparable. This idea and this service are growing so rapidly that before long they will become universal in this country. There are protean problems to solve in the administration of both the large and the small hospitals, but these hospitals are destined to become, next to schools, our most beneficent institutions. In the near future our people will submit willingly to taxation for the support of public hospitals as they now do for schools. And why should the people not do so, once they learn the value of these hospitals? Is it not the business of the state to "promote the general welfare?" The health of the hog is a great asset to the state of Missouri, but the health of her people is a much greater asset, and the people will gladly pay the cost of maintaining good health service if once they see that it is practical. From an economic point of view, the fostering of hospitals by the state is excellent business. Long since, the state has been committed to hospital service for certain unfortunate classes of her population. Our state psychopathic hospitals are not grudgingly supported. We have a state hospital for tuberculosis. Clearly these care for only a small part of the many diseases flesh is heir to. It is even more the obligation of the state to establish a general hospital where all manner of diseases may be treated. We know, of course, that there are diseases even more dangerous to a community than the homicidal tendencies of an insane patient may be. After all, our motive should not be for self-protection only, but the higher one of doing good to the individual citizen and through him to the people as a whole. The existence of asylums for the

*Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Jefferson City, April 6-8, 1920.

insane, without a general hospital for the normal person temporarily incapacitated through a curable disease, provided he be given right treatment at the right time, is a tacit admission that we are still crassly ignorant, or have not got beyond mere selfish motives. The state cannot legally admit its duty to the insane patient and deny it to any other type. Of course, this is not to argue that the entire obligation belongs to the state. There is an abundance of work and a place for all forms of private philanthropy whether conducted by churches, cities, communities, or counties.

My present purpose is to show the great special work and the particular functions that a state general hospital might perform which could not be done by other hospitals. Our larger cities are now moderately well supplied with hospitals, but there is an ever increasing demand for more beds. Our counties and smaller communities have no hospitals. It is absurd to maintain that these more sparsely populated communities should not have as good service as the cities. But how may they get it? Country doctors know the crying need for hospital service, alike for rich and poor. We have recently a new law which makes it possible for counties to erect and maintain hospitals. Several counties have already taken advantage of this law and it is hoped many more will do so. With proper standardization, the regulation and management of these hospitals is perfectly feasible and they may do a service of inestimable value which may be accomplished in no other way. Let no college of surgeons or any other society decry them! These county hospitals must come, and they must be helped to do the best service possible. If proper efforts are made to standardize and increase their efficiency, the abuses that may arise will be infinitesimal as compared with the great good in public service accomplished. Many emergency cases among both rich and poor are lost every year in this state because a hospital is not immediately available. It is obviously impossible to take all such cases to city hospitals, even if all such patients were able to bear the expense, as many are not. Provision should be made so that the surgeon or physician may come to the county hospital more often. And then what important factors such local health centers become! The people generally become acquainted with the meaning of better health service. The hospital becomes a nucleus around which there gathers a general knowledge of nursing and of health care. The physicians themselves do much better work, team work, and shortly a much higher standard of service is secured. It is a great educational instrument. Of course its work may be much amplified in many ways, both clinical and edu-

cational. The social service work may all be conducted from such a center. Do you know that the county and cross-roads physician is becoming scarcer every year and that soon there will be very few of them left? In many places even now country folk have no nearby physician. Just such circumstances help to drive people from the country to the city; a movement, as we know, becoming increasingly acute and fraught with danger to our national life. The county hospital and good roads are the only means of their salvation. And these people are the producers and the very foundation of the nation. Must we serve them? Selfish reasons alone should impel us to do that. But for greater and better health service, as I have said before, education is the most important factor. We may not hope for better conditions until we care more for the education and re-education of our medical men and the public as well.

It is now a well established principle of the states that higher technical and professional education shall be provided for the citizens of the state. This public education in the higher branches, paid for by the state funds, is not offered for the benefit of certain individuals merely. It is not designed to equip these persons with a profession and a means of livelihood. It is designed for the welfare of the state as a whole. Each person so equipped, whether in law, engineering or medicine, owes something in service to the state, some benefit to return for what he has received. This old Jeffersonian idea is no longer debatable. No other technical school can give back more valuable service to the state than that given by the school of medicine; the state is consequently under obligation to furnish this form of education above all others. The state, of course, should foster every professional school that contributes to the "general welfare." The modern science of medicine, which has so greatly benefited the science of agriculture and animal husbandry, has lengthened the span of life, and contributed much to human health and happiness. No other science has done so much. When we try to estimate the value of Pasteur's discoveries all others pale into insignificance. When we know these facts and think on these things, it is strange that we as a profession do not insistently demand from those in authority the schools necessary for the best education of our doctors and for education in health matters for our people in general. This is not only a matter of right and justice to the medical profession; it would be a piece of extremely good business on the part of the state.

Medical education has now become such an expensive profession to acquire that to our poor boys and physicians' sons it is well-nigh

prohibitive. We want no medical aristocracy, dependent on wealth. The state should help us in every way possible to acquire knowledge, and not exploit us after it is acquired. Let the state help us to knowledge that we may serve with dignity, with independence, and therefore with the highest efficiency. Is it state medicine we want? State medicine will come if we make it mean state medical education and start hospital service for the care of those unfortunates who may not have such service without state aid. It will not come if the state refuses us education and in addition exploits us by some socialistic "panel" system, robbing us of all initiative and incentive to work. A state requires a certain legal qualification for a doctor. Does not this obligate the state to furnish this required education? Now, you may be saying, if you are not thinking: "Of what is this person dreaming?" No. This is not a dream! It is an ideal, it is true; but it is a perfectly feasible and practical one, as I think you must admit. Let me outline it. What do we in the state of Missouri need? We need a great medical center in the Missouri University. By this, I mean a great school for postgraduate, undergraduate, and research work. We need the highest class of full time professors in all departments. Our preventive medicine management and sanitation should all come from the medical department of Missouri University. This department should be coordinated with and should co-operate with our state and local boards of health in every possible, helpful way.

Missouri University should undertake to teach health matters to all the people through the several recognized means of extension work: in bulletins, correspondence, advertising, popular health lectures, and visual education in all our schools. No privately endowed institution can successfully undertake this most important work. The state would be repaid many times both in health and expense, and the people would gladly pay the small distributed cost when they realize the great benefits derived. "But," you say, "this extension work might be undertaken even now, but how is it possible to teach medicine without clinics?" Indeed, that is impossible. We have in the Missouri University medical department only the freshmen and sophomore classes, to our shame as a state and as a university. We must send our students elsewhere to complete their courses. This is most unnatural and unjust. Strenuous efforts have been made to establish complete state medical education in our great cities but without success. The medical profession of the state had not yet awakened to the importance of the matter to give the efforts proper support.

Now we may have ample and selected clinics, if the state will give us a state general hospital. This, then, is my plea:

Let us have a state general hospital with Missouri University medical department to serve all the state, and for teaching our medical men, both undergraduate and postgraduate. Let us have articulated with this hospital our several county general hospitals, and all such private and community or city hospitals as will standardize to a certain prescribed excellence of service. This articulation will be somewhat after the plan of our university in its relation to accredited schools and junior colleges. The laboratories and all the special and more technical skill available will supplement and aid these junior hospitals. Patients, of course, may come from anywhere in this state; but these articulated hospitals would furnish selected clinical material. Many of these patients may be examined in consultation and sent back to the hospital from whence they came. Can you not see what a superb clinic this would become in time, furnishing teaching facilities second to no other? Can you not see how helpful and what an uplift it would be to the professional and medical service all over the state? See how easily these county and other hospitals may be standardized, and the abuses so liable in smaller hospitals be avoided. What an educational force to the local profession about the smaller county hospitals! Interns and nurses in training may be interchanged, much to their advantage. Such coordination must of necessity make for better service all over the state; and the profession about these smaller hospital centers must of necessity awaken and keep pace with the times.

You see this is no dream; it is a perfectly practical plan. We need a state general hospital. We need standardized county general hospitals. We need a complete medical school in Missouri University. We need medical extension work and general medical education. We, as a profession, need to awaken and demand of our legislators complete educational facilities. A state general hospital and a complete medical department should be first, and all other good things may be added in time.

OPERATION FOR TUBERCULOSIS OF THE WRIST.
—The operation devised by Leonard W. Ely, San Francisco (*Journal A. M. A.*, Dec. 18, 1920) necessitates cutting a groove in the radius and the third metacarpal and transplanting into it a graft from the tibia. The result is said to be a useful hand, possessing as much rotation as before the operation, and with excellent power in the fingers and thumb.

THE LUCILIA CAESAR EPIZOOTIC*

TRANSMITTED THROUGH ITS TOXIVIRULENT
LARVAE; AND ITS ETIOLOGIC RELATION
TO SIMIAN AND HUMAN POLIO-
MYELITIS

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Wilkins and Dutcher, of the University of Minnesota, have published paper No. 211, Journal Series, Minnesota Agricultural Experiment Station, entitled, "Limberneck in Poultry," and therein have reported the facts established by them concerning the role of *L. Caesar* in the transmission of the disease, and their conclusions. The following quotations are taken from their publication:

"Saunders, who has done more than any other investigator to advance experimental data to prove that flies play an important role in the development of limberneck, states:

"The green fly epizootic, as I have formulated the theory of its working, is propagated as follows: The female insect feeds upon the carcass of a victim, upon its excretions (or the excretions of a case of poliomyelitis) and becomes potentially infected. After three days the ova deposited are toxivirulent. The creature which receives these toxivirulent larvae, within a few hours, or certainly within a few days, becomes the subject of motor paralysis and death. A chicken died within six hours after swallowing three larvae. All attempts to inoculate fowls or guinea pigs or other animals with the blood or tissues of animals dying from ingestion of the specific larvae have failed. On the other hand, the carcasses of the animals dying (usually within a few hours, sometimes several days after the ingestion of the specific larvae) never failed to infect green flies so that their larvae from ova deposited the third day after feeding were toxivirulent. We could kill a young fowl or guinea pig of any age, sometimes within six hours, by the oral administration of a single specific larva. An old rabbit was killed within two hours by the injection intraspinaly of a few drops of the filtered emulsion of the specific larvae. This acute spinal paralysis affects all of the scavengers on the farm and spares the clean

animals, and the theory of limberneck resulting from the consumption of carrion has been utterly disproved by our experiments in feeding fowls on putrid flesh, even when seething with maggots. Besides these experiments in the laboratory I have accumulated a large amount of information from all over the country tending to show that it is not putrid flesh nor even maggots in putrid flesh as such, which produce limberneck in fowls, but that maggots grown in the carcass of the fowl or in that of any animal which died of a limberneck virus, are capable of producing speedy paralysis in any animal which devours them.

"Several writers on pheasant management emphasize the necessity of procuring and feeding maggots to young pheasants, and the experience of one of us (S. D. Wilkins) warrants that practice, for the birds not only grew well, but no losses were observed which could not be explained in other ways.

"In order to examine this phase of the problem further, we have fed large numbers of the larvae of the domestic house fly, *Musca domestica*, of the large blue bottle fly, *Calliphora vomitoria*, and of the green bottle fly, *Lucilia Caesar*. Flies were allowed to deposit their ova on fresh beef and the larvae which resulted were used in the feeding trials. In this manner we fed several hundred maggots from all three species, feeding as many as 700 to one chicken, and in no instance was there any evidence of abnormal condition resulting from the consumption of maggots.

"Later we caught and introduced into the fly-proof animal cage a large number of common house flies and allowed them to feed on the carcass of a limberneck chicken. We fed the maggots which developed from the ova of these flies, and regardless of the time allowed for the flies to feed and the number of maggots fed, the results were negative with chickens and guinea pigs. We also obtained negative results when the maggots of the large blue bottle fly which had fed on the limberneck chicken were fed to chickens and guinea pigs.

"On August 15 the Rhode Island Red chick was found paralyzed in the brooder house at the University Farm. Its temperature was 106.3 degrees. There was a noticeable coryza present. The bird weighed 448 grams. The chick was killed on the afternoon of the same day and placed in the fly cage with *Lucilia Caesar*. At the same time we fed two normal White Leghorn chicks on 100 flies each of the same species. Neither chick showed paralytic or limberneck symptoms after eating these flies. (White Leghorns were used because they could be obtained at less cost than chicks of the heavier breeds.)

*Read before the St. Louis Pediatric Society, December 17, 1920.

"It is worthy of note that the Rhode Island Red chick which was found paralyzed had been fed and cared for in the same manner as the other chicks in the flock of more than 100. Examination of the food given to these chicks, in the light of our present knowledge of the vitamin content of certain foods, would indicate that in this case we were not dealing with a vitamin deficiency disease. The chicks had free access to young green alfalfa and other grasses.

"Saunders states that White Leghorn chicks will not eat the fly maggots unless the chicks are first starved, but that Rhode Island Red chickens will consume them greedily. To this fact and to the popularity of the Rhode Island Red chicken he attributes the possibility of the spread of poliomyelitis and limberneck. In our work we have had but two limberneck chickens which were not Rhode Island Reds, and these were White Plymouth Rocks. We have not yet found a White Leghorn showing paralytic or limberneck symptoms, but we have been able to produce such paralysis by feeding the larvae to White Leghorns.

"August 21 a large male guinea pig was given two of the larvae taken from the carcass of the Rhode Island Red chick and the fly-proof animal cage. Eight hours after being fed the two maggots the pig was paralyzed in the hindquarters to the extent that walking was impossible, and at this time there was a considerable discharge at the nostrils. Two hours later the pig was dead.

"A White Leghorn chick weighing 330 grams and having an initial temperature of 106.4 degrees was fed 22 of the larvae from the carcass of the chick paralyzed on August 15. During the ten days following this date (August 22) no paralytic symptoms were observed.

"August 24 a female guinea pig weighing 356 grams was given one larva from the carcass of the Red chick at 10:45 a. m. At 8:30 p. m. of the same day this pig was unable to move the hind quarters, and it was found dead at midnight.

"On September 7 our attention was called to a hog which had died of a paralytic condition which seems to be quite prevalent over the state. This hog was similar to others that we have noted, being completely paralyzed in the hind quarters. The head of this hog was placed in a large screened cage containing a number of *Lucilia Caesar* flies. On September 15, one hundred larvae were taken from this head and fed to a White Leghorn cockerel. Limberneck symptoms developed in a few hours, and in a short time the cockerel was dead. This is the first case of limberneck that we have been able to produce under experimental conditions. While it is known

that this paralysis in hogs is quite prevalent over the state, we have not been able to obtain information concerning the dietary history or the hygienic environment of any of these hogs.

"*Lucilia Caesar* were allowed to feed on the carcass of the White Leghorn from the above case and, on September 19, 213 larvae were fed to a Rhode Island Red chick weighing 400 grams. This bird died the same day; its temperature shortly before it died was 107.2 degrees. The head of this chick was inverted and the bird attempted to walk backwards. The legs and wings did not show any effect of muscle paralysis. The carcass was placed in the fly cage at once and *Lucilia Caesar* allowed to feed. On September 26 a small White Leghorn chick weighing 250 grams was fed 200 of the larvae. No paralytic symptoms were observed until September 30, when both legs and wings were affected. This chick ultimately recovered. At this time cooler weather made it increasingly difficult to obtain this fly in large numbers and we made no further effort to carry on the experiment.

"The fact remains that the only positive results which we have obtained in our efforts to produce limberneck in chickens have resulted from the feeding of larvae of *Lucilia Caesar* which had (previous to their consumption by the chickens) fed upon the carcasses of limberneck chickens or upon the carcasses of paralyzed animals. Pressure of other duties and lack of assistance required that this work be terminated, for the present at least. We are therefore submitting this material in the hope that it will stimulate others to continue the work.

"*Conclusions.*—1. Limberneck symptoms are not comparable to the symptoms in polyneuritis brought about by dietary deficiencies.

"2. Limberneck is undoubtedly a symptom rather than a disease.

"3. It was not possible to produce limberneck symptoms in poultry by feeding and injecting the toxins produced by three different strains of *Bacillus botulinus*. The strains were toxic, however, to guinea pigs.

"4. Symptoms of botulinus poisoning in chickens differed markedly from limberneck symptoms.

"5. It was impossible to produce limberneck symptoms by feeding common salt, paint skins (lead poisoning), smut or spoiled meat.

"6. Larvae which developed from eggs (from *Calliphora vomitoria*, *Musca domestica*, and *Lucilia Caesar*) laid upon fresh beef were not toxic when fed to chickens.

"7. No limberneck symptoms were observed when larvae were fed which had developed from eggs laid by *Calliphora vom-*

turia and *Musca domestica* upon limberneck carcasses.

"8. Limberneck symptoms were obtained by feeding larvae of *Lucilia Caesar* which had developed from eggs laid upon limberneck carcasses.

"9. Adequate diets do not protect against limberneck in poultry.

"10. The body temperature of the chickens falls below normal in botulinus poisoning and in polyneuritis (avian beriberi), but this was not observed to be the case in 'limberneck chickens.'"

In 1912 I began experimenting in the direction in which these investigators have followed, and within two years reached the following conclusions:

1. Limberneck is a disease of birds, transmitted through an obligate insect host, *L. Caesar*, and no species is immune.

2. Ptomaphagous quadrupeds are equally affected, and clean animals are not exempt from accidental infection.

3. Even reptiles are susceptible.

From this basis of fact I proceeded to experiment upon monkeys with the following results: A few toxivirulent larvae of *L. Caesar* administered by the mouth would within 12 hours produce drooping, profuse coryza, paralysis of deglutition motor paralysis, and death by apnea, the heart beating for five minutes after cessation of respiration.

In the few cases that survived for nearly a week, the spinal fluid proved infective. After the introduction of a few drops into the spinal canal of a healthy monkey there were no symptoms for 8 days (in one case 11); then the same symptoms would ensue as described. In two cases the monkeys survived with muscle group paralysis of the foreleg. Sections of the spinal cord in the fatal cases, also in dogs, showed changes approximating those found in Simian experimental poliomyelitis. The difference in the time of development of symptoms between the cases receiving toxivirulent larvae and those receiving inoculation from a previous case, is due to the fact that the maggots contain both a reservoir of the toxalbumose, and the active virus. The first is readily absorbent and paralyzes within a few hours; the latter acting without the aid of its larvae toxine, requires an incubation period of a week or more. No organisms could be cultured from the spinal cord of the victims.

The sweeping conclusion was reached that the *L. Caesar* epizootic affects all the higher forms and life and that man cannot be exempt. At first it was sought to identify only sporadic poliomyelitis with the epizootic, but eventually the epidemic form was included.

The considerations which led to the whole line of investigation were briefly these:

(a) The utter inadequacy of the prevailing theory of the cause of limberneck to account for all the facts.

(b) The barrenness of the recently adopted theory of the personal transmission of poliomyelitis.

(c) The coincidence of paralytic epizootic and of poliomyelitis as observed in the rural districts.

The lines pursued were those of collective investigation by experimentation, and of observation of the De Queen epidemic of 1913.

My collaborators were: Drs. W. E. Wisdom, T. Wistar White, Phil Hoffmann, E. A. Meisenbach, Chas. L. Klenk and T. L. Rives. The animals experimented upon or observed were: fowl, sparrows, buzzards, guinea pigs, rabbits, dogs, badgers, opossum, hogs, horses, cows, calves, colts, black snakes, moccasins.

In view of the proven fact that no quadruped, bird, or reptile was found to be immune to the toxin, man could not be considered as exempt. The occurrence of paralytic death in men and in animals proven to be due to botulinus presents some points of similarity to the *L. Caesar* epizootic, but can be readily differentiated. The well-known microbic agent in the first is a toxicogenic saprophyte generating a toxin of marvelous potency which perishes at 75 C. Aided by its toxin it can penetrate the living animal tissue, but without this aid it is impotent to do so. The unknown pathogenic microbe in the second generates a toxin which perishes at 60 C. The *Bacillus Botulinus* is spore bearing and exceedingly resistant to heat. The virus of *Lucilia Caesar* epizootic is quickly killed by a temperature of about 60 C. Moreover, the dog is immune to *Bacillus Botulinus* toxin, whilst it is very susceptible to the *Lucilia Caesar* toxin.

The most difficult and tedious part of the whole line of investigation was the study of the fly which is the obligate host of the virus through its ova, the universal enemy.

There are four species of green fly, but *Lucilia Caesar* can be readily distinguished by its iridescent appearance. It is a carrion fly, but does not hesitate to deposit its eggs upon any decaying animal or vegetable matter, especially upon excrement. It is ubiquitous, being found from Alaska to the Equator. Its range of flight is astonishing. Within three minutes from the time that a sportsman in a boat on Lake Superior had caught his first fish a *Lucilia Caesar* had appeared from the shore a mile distant. A single fly attended a lady on horseback, riding 150 miles through the Arizona desert. Its resistance to cold exceeds that of any insect known to us. On a day in December when the thermometer regis-

tered 18° F. and a strong north wind was blowing, one of these little creatures was seen crawling across the granitoid sidewalk. During a two weeks' spell of zero weather, a lady in Poplar Bluff (Mo.) killed over one thousand of these insects in her house. During the fall the field mice became so troublesome that she had placed poison under the house, with the result that all the green flies in the vicinity were attracted to the carcasses. When the weather became very cold they crawled up between the walls and entered through the window-cord openings. When we became aware of the fact that in rural Sweden the dwelling house and the stable are closely connected, we could understand how poliomyelitis can occur in the winter through the agency of *Lucilia Caesar*. As to the likelihood of the dreaded ova (or larvae) being deposited upon the food of man or of clean animals, the following observations will be enlightening: A hot roast was brought from the oven and placed upon the table; a single green fly was noticed in the room; about ten minutes after all the guests had been served, a batch of small skippers was seen crawling across the cut surface of the meat. A family going on a fishing excursion had carefully prepared the sandwiches at home, wrapped in paraffin paper; when opened at noon they were filled with maggots. *Lucilia Caesar* delights to deposit its ova upon man's food, likewise into any orifice of the animal body—the ears, the nose, the lips, the anus, and more often upon the milk ducts of mammals. Hence, the frequent occurrence of paralysis in sucking animals.

In a former article we warned against too scrupulous cleanliness in the alleys whilst leaving the pantry, kitchen and dining room unscreened. The experience of Newark during the great epidemic of 1916 sadly exemplified the soundness of this position. The citizens had subscribed money early in the season for a cleaning up. When the work was half done the funds became exhausted. When the scourge came the sanitary portion of the city suffered far worse than the unsanitary.

There is nothing in medical literature that is more astonishing to the mind of the unprejudiced reader than the statements of the writers who are committed to Wickman's theory of human transmission of poliomyelitis. His original statement that the disease follows the lines of human travel is entirely misleading, unless the further fact be stated, "during the insect season only." A study of all the epidemiologic charts produces upon the mind at once the impression that we have to do with an insect-borne disease. Listen to Vulpins who, after summing up all the evidence against human transmission, says:

"Nevertheless we must conclude that man is the chief offender." Imagine a jurist convicting the defendant, after reciting all the facts which demand his acquittal, with such adversative logic as that. Is medical science alone exempt from the laws of logic? Miller states that immune carriers (mythical) are much more productive of the spread of the disease than are the sick. Frost, in his report upon the last New York epidemic, states that "over-crowding" does not tend to the spread of the disease. Of what other supposedly man-borne disease would such a statement be made? True it is that over-crowding does not tend to spread poliomyelitis, even in the tenement districts of New York, where 10,000 cases were counted in 9,997 different families. The utter failure to stem the tide of the epidemic by acting on the theory of human transmission, whilst the streets were swarming with infected *Lucilia Caesar* issuing from its breeding place in the subway then under construction, should have convinced any unprejudiced mind that Wickman's theory was wrong.

Undoubtedly this was the case, for the medical authorities insisted upon opening the schools as soon as the fly season was past—over the agonized protest of the parents—and no harm came of it! The testimony of every hospital in both epidemics, that of 1907 and that of 1916, was to the effect that concentration in hospital wards did not produce infection. Lastly, the advocates of direct transmission have to explain why inoculated monkeys have not, except in the one instance reported by Levaditi, infected healthy animals in the same cage.

Seeing that Simian poliomyelitis is a strictly inoculable disease, and that human poliomyelitis in its epidemiology contradicts every known law of ochletic transmission, it seems imperative to accept the *Lucilia Caesar* epizootic as the logical etiology.

It is useless to bury carcasses in the hope of protecting against *Lucilia Caesar*. If already blown the maggots will work their way to the surface through six feet of earth. If not blown, the fly will deposit its eggs on the surface, and the maggots will reach the carcass. Likewise wire screens are no protection to food against the ova deposited on the outside.

Of all known insects *Lucilia Caesar* is most readily trapped. Its predilection for boiled or bruised cabbage is so great that it is called the "cabbage fly" in some localities. After all carrion and garbage is disposed of, every fly within a mile to leeward can be brought to the trap by boiled cabbage. All carcasses and garbage should be burned or treated with larvicide.

As to the possible modes of transmission of Simian, and by parity of reasoning, the human poliomyelitis anterior acuta, they are two:² (a) By inoculation of the virus alone, not into the blood or tissues (a method which has always proved futile) but into a peculiarly vulnerable locality, as the cerebrospinal canal, nerve tissue, abraded nasal mucosa, abdominal cavity. (b) By internal administration of the virus fortified by its attendant toxin as found in its habitat of choice, the ova (or larvae) of infected *Lucilia Caesar*.

It remains to be seen whether an antitoxic serum of high potency can be prepared by a progressive administration of toxivirulent larvae to animals.

In the absence of *L. Caesar*, polio is epidemiologically no more to be dreaded than is malaria without anopheles, or yellow fever without stegomyia.

Theoretically inoculation might take place through the bite of blood-sucking insects, but as the virus has never been found in human blood this mode of transmission is in the highest degree improbable. In monkey's blood the virus has been found, and the disease actually transmitted through the bite of stomoxys.

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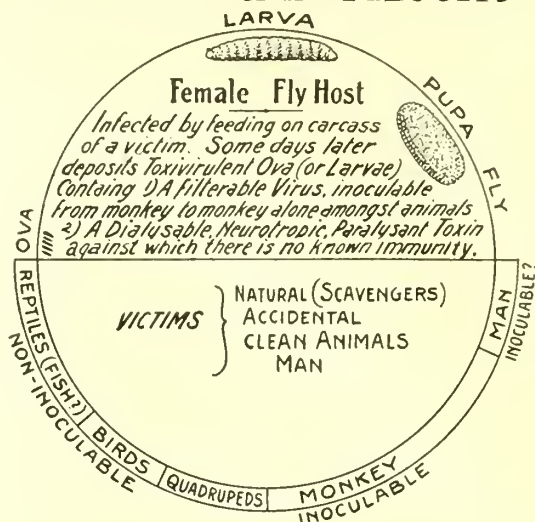
DISCUSSION

DR. STINE of the Missouri State University stated that every year there are about five or six victims of polio entered as students at the University. They come for the most part from farms and villages where there has been no epidemic. In fact, Missouri has never had anything like a local epidemic. He stated also that there was an outbreak of polio amongst the German troops on the eastern front where there were no children, but where there was a paralytic epizootic amongst the domestic animals at the time. He also spoke of a case which occurred in an Alaskan hut where two men were wintering and where flies were observed moving about in the air-tight, warm hut in the depth of the winter.

DR. MARRIOTT remarked upon the escape of the children living near garbage dumps in New York in the epidemic of 1917, thus confirming the truth enunciated before, that nothing is more dangerous than clean alleys where access of flies to the food of human beings is permitted.

DR. RIVES described the effect of toxivirulent larvae upon pigs observed when he was working in collaboration with Saunders, Wisdom and White in 1913. White showed cross sections of the spinal cord of monkeys and dogs which were obtained at that period.

LUCILIA CAESAR EPIZOOTIC



THERAPY IN PULMONARY TUBERCULOSIS*

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The Greek physician, Hippocrates, taught his students that the highest duty of the practitioner was to prevent disease, then to cure disease, and lastly, where prevention or cure was impossible, to alleviate suffering. This precept has been handed down to us through the past centuries and is as highly applicable today as it was in the period when he lived and followed the art of healing. If we would glance over the musty pages of medical history we would find that prevention and cure played minor rôles in comparison with attempts at relief of distress. We should not be surprised at this if we consider that very little if anything was known concerning prevention until the discovery of vaccination by the English physician, Jenner, in 1796. Up to that time smallpox was as rampant throughout the then known world as tuberculosis is today. We also know that various pestilences, plagues and epidemics would frequently make their appearance at different periods, and often almost depopulate the countries of Europe.

The carrying out of prophylactic or sanitary measures, or whatever attempts were made by the medical profession or the laity, seemed futile and were apparently of no avail. The times were steeped in superstition and the people believed in the practice of incantations, prayers and the wearing of amulets

*Read before the Madison County (Illinois) Medical Society, Highland, Ill., Aug. 6, 1920.

for their supposed efficacy in the warding off or the healing of disease. Little was known of the etiology of disease and nothing whatever of asepsis. Sanitation in our present-day conception of it was yet to be discovered. Even the lesson taught by Jenner was at first ridiculed and made a very poor impression on the minds of the medical and lay authorities of that generation. It required the epoch-making discoveries and monumental labors of such men as Lister, Pasteur and Koch to bring before the public, both lay and medical, the real importance of scientific investigation and its direct relation to the health of the individual and the community as a whole. Their efforts gave birth to modern medicine and demonstrated the verification and significance of the teaching of Hippocrates.

Today prevention instead of playing a minor rôle in therapeutics has developed into the one dominant and significant factor in prolonging the life of the individual, in improving the health of nations, and in making possible the very existence of our large communities. Still, one might inquire what relation does this have with the problem of tuberculosis? We know its etiology, pathology and symptomatology, but we find that its prevalence is if anything far greater today than ever before. If we stop to consider the ever presence of the tubercle bacilli in the air, dust and food, one would wonder how any person ever escapes the disease. The fact is, this organism allows very few of us to die without leaving some trace of its activity in our system. There is an old German axiom: "Jeder mensch hat an ende ein bishen Tuberculose." This has been demonstrated by Naegali, the German pathologist, who showed that the presence of healed tuberculous scars and fibrotic changes due to the tubercle bacilli were found in 98 per cent. of the bodies which he examined on necropsy of people who had succumbed to various diseases besides those dying of old age.

It is not within the scope of this paper to enter into the history of this malady, but rather to attempt to give a brief survey of our present knowledge in regard to its treatment. In order to apply successfully therapeutic measures in a given ailment, it is essential to have a thorough understanding of its pathology and the factors which are favorable for its spread. Today we know that infection with this malady most often occurs in childhood. This is due either to exposure to some already infected individual, to the ingestion of contaminated food, or through the air passages by inhaling bacilli-laden dust. This, as has been stated before, we learn from post-mortem findings. Statistics show the presence of a positive von Pirquet skin test in 90

per cent. of children above the age of 10 years. It is essentially a disease that has its beginning in childhood. Hence, if this is the case, we must endeavor to strike at the enemy at his weakest point; that is, to carry out the principles of prophylaxis in reference to children. They must be protected from becoming infected. This can be brought about by avoiding exposure, through rigid examination of our food supplies, milk, meats, etc., by careful inspection of dairies, slaughter houses, and the various industries that now produce in finished form so many of our food products. At present we see these measures to a certain extent observed. We see it in the work of our health departments through their sanitary inspectors, veterinary surgeons, school physicians, the conduction of open-air schools, the establishment of night and day camps, dispensaries for the diagnosis and treatment of tuberculosis, health centers and sanatoria. However, this is not sufficient when we consider that sunshine, fresh air, plenty of sleep, good food in ample quantities, and suitable environment, are the important factors in the well-being of the child. This goal will never be completely attained until the tuberculosis question is looked on as an economic one and not so much as a disease of the individual. When society fully recognizes this fact and requires that every child has the proper amount of food and proper environment, then will we be on the road to solving this difficult and complex problem.

Social conditions which engender the existence of slums and Ghettos in our large cities, the so-called submerged tenth, the underpaid and overworked laborer, who usually has a family of several dependents to support, are the fruitful factors that continually tend to supply our ever-growing army of consumptives. It has been said that tuberculosis is no respecter of persons, but it is a respecter of proper hygiene, sunshine and fresh air. Our statistics conclusively show that the incidence of this affection is by far the greatest in those who are undernourished, overworked and who violate the rules of proper living. If all these factors which are so evident were properly studied and utilized by our health authorities and legislatures, the time would soon be at hand when the spectre of tuberculosis would become a problem of the past, as much so as smallpox is today. The average practitioner reads about smallpox, but seldom comes in contact with a case.

So much for prevention when viewed from the standpoint of the sanitarian. The question that confronts us is, what can we accomplish in view of the present state of affairs? That which concerns the average doctor is,

what can he do for the consumptive when the diagnosis is made and the unfortunate subject is looking to him for advice. My experience with the medical profession during the past ten years compels me to admit that there is at present as much doubt in the minds of most physicians as there is in that of laymen as regards the curability of the disease when once established. Often have I been informed by the patient that his medical adviser had given him up because there was no cure for his condition. I admit that in the advanced state there is no cure in the sense that he will ever be as well as he was prior to the onset of his trouble. Statistics show that the earlier the diagnosis is made the better the prognosis. Granting this, it is incumbent on the physician to make an early diagnosis. It is deplorable that the average doctor utterly fails in this most important aspect. Many patients have consulted their physician only to be told that they had either a slight cold, a touch of bronchitis, or a congestion of the lungs. They were dismissed with a prescription for a cough syrup and the information that they would soon be well. If the practitioner was constantly on his guard he would frequently diagnose his case in time and then the cure would be much more simple. Admitting that the physician has diagnosed his case in its incipency, what is the most important step to pursue? Inform the patient of the true state of affairs and outline the treatment that would best meet with his needs. In this I can only give a brief outline: 1. The patient must be told that the cure is primarily a question of proper nutrition, proper digestion and assimilation. 2. Place the patient in proper surroundings. 3. Employ suitable measures which in a local or general way will retard the tuberculous process. 4. Relieve the symptoms as they arise.

The open-air treatment can be carried out at home or, if the subject is in affluent circumstances, change of residence to a suitable climate or sanatorium may be advised. When he has fever it is always necessary that he be put at rest in bed. You should no more permit a tuberculous subject to be up and around with fever than you would one suffering with typhoid. Should home treatment be advisable, have him sleep outdoors on a screened porch and proceed to carry out the same routine as you would in a sanatorium. Above all, keep in mind the four essentials: sunshine, rest, fresh air, and nourishing diet. Regulate your patient's habits; see that he gets plenty of sleep, and at all times try to keep him in an optimistic frame of mind. Nothing benefits such patients more and lends greater encouragement than when they see that their doctor has faith in the ultimate improvement

of their condition. If it is not practical to treat the patient at home, have him transferred to a hospital or sanatorium. In St. Louis there are three local institutions for the care of such cases in all stages of the disease; and we have also the state sanatorium located at Mount Vernon, Mo., in the Ozark Mountains, where incipient and moderately advanced cases are received free of charge. Do not permit a patient having an active lesion (which usually manifests itself by afternoon rise of temperature) come to your office for treatment. You would not expect one with lobar pneumonia to do so. Insist on attending him at his home. The more emphasis you lay on this point the better will be your results.

Supposing that you have your patient at rest in bed, his fever under control, his appetite improving, and he is taking on weight, what is the next step? It is to endeavor to build up his resisting power, or his natural immunity to the point where he will have sufficient reserve vitality to enable him to counteract the effects of the tuberculosis toxins, and thus bring about an arrested condition. Here, again, rest, fresh air, and good food are the most important aids. In a certain percentage of cases the best teachers advise the use of tuberculin. It should be employed only by one skilled in its use. The object of its use is an aid in the building up of immunity which is brought about by its stimulating effect in the production of antibodies in the patient's blood. A course of tuberculin therapy requires from six to twelve months. It should be administered in cases that show a favorable response. Frequently more harm than good results from its employment. This is due to too rapid increase in the dosage and not carefully watching for the reactions that are likely to take place. It is impossible, on account of lack of space, for me to enter into the details as to the theories of its use and application. Suffice to say that it has its proper place in the treatment of this condition.

As has already been stated, for the fever the best remedy is rest in bed, but often we find it necessary also to employ the aid of drugs. In my experience the most efficient one for the reduction of temperature is pyramidon, which is a dimethylamido derivative of antipyrin. The dose varies from 2 to 7.5 grains. It is given two hours before the rise of temperature takes place. It very seldom fails in producing results. The patient feels better when his fever is under control. The rate of metabolism is lowered, resulting in less wasting of the body tissues. For night sweats give atropin sulphate, 1/75 to 1/150 grain at bedtime. Sometimes dilute sulphuric

acid, 15 to 30 drops, does just as well. For the cough give a sedative mixture containing 1/16 grain of heroin hydrochlorid, on codein phosphate, 1/6 grain to the dose. My experience has taught me that the less medicine you burden your patient's stomach with the better are the results. Of course, there are times when the judicious use of the proper drug is absolutely needed. For hemoptysis or hemorrhage, rest in bed, ice bags to the affected side of the chest, and if necessary a hypodermic injection of morphin sulphate, are the measures to be adopted. Sometimes ergot, 1 grain, given hypodermically is effective over a period of time. Fixation of the chest by strapping is of value.

In conclusion I wish again to emphasize that the question of tuberculosis therapy is one more of prevention than of cure or relief of symptoms. It is far better for society as a whole to avoid a disease than to attempt to cure it. In the end it is less expensive both to the purse and to the welfare and happiness of the individual. The time will come as surely as we are here today when tuberculosis, the white man's plague, will be as distinctly a disease of the books as are yellow fever, the bubonic plague, and a host of other infections that formerly afflicted mankind as scourges. The day is not far distant when the doctor will be the sanitarian and as a Chinese custom has it be paid for keeping people well

316 University Club Building.

A SIGN OF VALUE IN EARLY PHTHISIS

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The diagnosis of early pulmonary tuberculosis is beset with numerous difficulties. Clinicians are at a loss to decide how to interpret vague, indefinite, suspicious findings; yet they must come to a conclusion which all too often is clouded in doubt. It is unfortunate that the very disease concerning which the lay public is most interested in should so baffle diagnosis.

We believe that in the large majority of instances the positive diagnosis of an early lung tuberculosis is made on subjective symptoms alone. Is that fair to the patient? Is it just to the physician? Let us see. An individual presents himself for medical attention. If he complains of cough, hoarseness, expectoration, languor, night sweats, loss of weight, hemoptysis, fever—we instinctively determine upon his ailment. If in addition he has a rapid pulse, and we believe we find evidence on

physical examination of impaired resonance, muscle spasm, weakened or granular breath sounds, increased whispered and voice sounds and fine crackles, we are sure he is tuberculous, and when we find the bacilli, as we usually do with this picture, we tell the patient he has "consumption." We have made a diagnosis of tuberculosis of the lung, but such a lung will show not an early but a fairly advanced process. A roentgenogram of such a chest will show the so-called mottling or tufting over the affected area.

How different, however, with the early tuberculous. He comes to the office—he is never sick enough to be confined in his home and says, "Doctor, I don't know what's the matter with me; I don't feel just right, but I am not sick."

"Do you cough?"

"Oh, once in a while."

"Do you feel tired?"

"Not particularly."

"Do you expectorate?"

"No, not more than usual."

"Are you losing weight?"

"No, not that I know of."

"How is your appetite?"

"Good."

"Do you ever suffer with night sweats?"

"Never."

"Ever spit up blood?"

"No."

"Do you have fever?"

"Well, I think perhaps I am a little feverish at times."

A physical examination is made with the greatest care and technical refinement. We feel sure we have overlooked nothing; we have been painstaking and conscientious. We summarize our result: pulse 90; temperature 99; suggestive impairment over right apex; muscle spasm questionable; prolonged expiration; increased whisper; no rales; sputum negative; Von Pirquet ++; complement fixation negative; tuberculin subcutaneously, negative; roentgen ray, suggestive to negative.

What shall we say? Is he tuberculous? We don't know. Vague symptoms and vague physical signs make for vague conclusions. How to eliminate the doubt in early phthisis, how to fortify suspicions and convert them to definite conclusions, is the problem that constantly presents itself. Surely no greater breach of professional trust could be meted out than that which implants a tuberculous process in a healthy lung or, even worse perhaps, that which sends the phthisically sick abroad secure in the conviction that there lurks no lung trouble. The former blights a life, the latter a community.

Our task then is toward diagnosis—posi-

tive, unequivocal and irrefutable. Every means and method that strengthens suspicion into fact must be available for all. This at once demands that any new or additional procedures be simple, easily performed, and correctly interpreted.

For the past ten years we have made it a routine in examining chests for possible phthisis, to pay particular attention to the heart, and especially to the pulmonary second sound which, in the absence of any organic right ventricular hypertrophy, is of inestimable value in that it is usually accentuated in early phthisis.

As we review the literature on the heart in tuberculosis, this "pulmonary second" sign increases in value.

Louis in 1836 pointed out that the heart of the consumptive is small, and this has been definitely proven since then, some authors believing that a congenital hypoplasia of the cardiac muscle is a predisposing factor in pulmonary tuberculosis.

Hypertrophied hearts are exceedingly rare in phthisis. Admitting the heart to be of normal size in incipient phthisis, it is believed to share in the general cachexia as the disease advances.

Sir Douglas Powell believes that the "right side of the heart is relatively somewhat enlarged and thickened in the chronic forms of the disease."

Fishberg maintains that a "large and hypertrophied heart appears to a certain extent a protection against the development of phthisis."

Rokitansky as far back as 1844 asserted that "diseases of the heart and blood vessels producing passive congestion of the lungs are a prevention of phthisis. Mitral stenosis and phthisis are exceedingly rare." In 907 autopsies showing tuberculous lesions in the lungs, Birch-Hirschfeld found but three cases of associated mitral disease.

The explanation for the rarity of mitral stenosis and pulmonary tuberculosis is found in the increased congestion in the pulmonary or lesser circulation.

Indeed, it is upon this very process that we account for the accentuated pulmonary second sound in early uncomplicated pulmonary tuberculosis, for we assume that when an area of lung tissue becomes affected, the body's defenses, as in all inflammations, meet the situation by pouring into and around that area an increased amount of blood, producing a congestion.

This area of congestion is not demonstrable by physical signs of percussion or auscultation but, effecting as it must an impediment to the lesser circulation, the right ventricle attempts to overcome the obstruction by the

utilization of its reserve energy. This results in an accentuation of the pulmonary second sound. Furthermore, it has been definitely shown that in proven tuberculosis, with bacilli in the sputum, this sign still persists even though percussion of the right heart, roentgen-ray plates and fluoroscopy fail to show any right ventricular hypertrophy.

Cabot and his assistant made a comparative estimate of the loudness of the aortic and pulmonic sounds in 1,000 normal cases and from this study infers that the relative intensity of the two sounds depends upon the age of the individual; that in the period of middle life, that period in which our sign has its greatest value, there is little difference between the two.

Fetterof and Gittings, in an anatomic study of the child's thorax, suggest "that the relatively loud sound of the closure of the pulmonary valve in children as compared with that of the aortic, may be due in part to the fact that the upper lobe of the left lung does not cover the pulmonary artery as well as in adults, and possibly to the presence of the thymus, which would furnish a good conducting medium from valve to chest wall. More important, however, is the physiologic difference in systemic tension between child and adult."

It is evident from the above observations that in normal adults the pulmonary second sound is never louder if as loud as the aortic second. When then a patient presents himself for examination, and among other findings his pulmonary second sound shows a definite accentuation without cardiac enlargement, it is well to bear in mind the possibility of phthisis.

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SOME OBSERVATIONS ON CASES OF BRONCHIAL ASTHMA*

From the Medical Clinic, Washington University Dispensary.

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Susceptibility to foods or pollens has been recognized for a long time. Elliotson,¹ during a clinical lecture in the early part of 1831, described the symptoms of hay fever and hay asthma as we know them now, and believed them to be due to the emanations from flowers and plants. He also cited a case with hay fever symptoms in which he was convinced that the symptoms were due to the emanations from a rabbit. However, hay fever and hay

*Read before the Washington University Medical Society, Nov. 8, 1920.

asthma were first described by Bostock² in 1819 and again in 1828. He considered the summer heat as being the cause. Macculloch³ mentioned the disease in 1828 and in speaking of the cause says: "It is produced by hot houses or green houses and in the public estimation it is particularly caused by hay fields." In 1873 Blackley⁴ produced edema and congestion of the conjunctiva by the instillation of certain pollens in the eyes of hay fever patients; he also observed that a cutaneous reaction was obtained by rubbing the pollen into the abraded skin of such patients. Johnathan Hutchinson,⁵ in 1884, described cases with vomiting and a sense of sinking and abdominal distress, sometimes of such severity as to lead to the suspicion of poison, that were due, he believed, to the ingestion of eggs, as these symptoms disappeared when no eggs were eaten. He further observed that these symptoms were produced even when egg was taken in the smallest possible quantity, as in puddings or soups; he also stated that honey, various fruits and vegetables, fish, tea, coffee and alcoholic beverages produced characteristic symptoms in susceptible individuals. One infers that in regard to eggs and fish he considered their degree of lack of freshness as being the causative factor in producing these symptoms. He also believed that milk very often caused eczema. The recent investigations of Meltzer,⁶ Walker,⁷ Rackmann,⁸ Talbott,⁹ and others, tend to emphasize the point that the diagnosis of bronchial asthma is but the first step in the diagnosis.

The following cases of bronchial asthma are taken from a series of 81 patients observed during the past year with special reference to protein sensitization. They gave cutaneous reactions to food proteins or pollens, and are presented because they have been under observation for more than one year, thus laying themselves liable to all the factors which the patients considered as being associated with or producing their asthmatic attacks. Furthermore those patients giving cutaneous reactions to the food proteins have been free from asthmatic attacks since the offending protein has been withheld from their diet, and, conversely, have produced attacks by eating the offending protein; and further they are now in the longest period of freedom from asthmatic attacks since the onset of their complaint.

CASE 55. White female. Age 29. Single. Domestic science teacher. Has had nonseasonal asthma since age of four years; has always considered that change of weather had something to do with precipitating her attacks. During her high school years she most frequently had an attack on Saturday evening and Sunday. During the first year of her col-

lege education she had a very severe season. She then had some nasal operation performed and considered that for the next year there was improvement because there was some decrease in the frequency of her attacks but no decrease in their severity. She also spent time in various portions of the West and believes that her attacks were less frequent but no improvement in their severity. In the later years of her complaint she noticed that wheat flour produced the hay fever syndrome whenever she came in contact with it. During June of 1919 she was told that she was sensitive to the proteins of wheat by Dr. Wander at the Skin and Cancer Hospital, and since that time she has been free from asthmatic attacks, except at those times when she has either willingly or unknowingly partaken of wheat. We are now able to explain the apparent vagaries of the disease during the earlier years. The Saturday and Sunday asthma were due to the fact that she always helped with the baking when she came home from school. The severity of her first year at college was due to the fact that her course of study required her to handle wheat flour to a large extent. The apparent improvement following the nasal operation and during the second year at college was due to the fact that her course did not require the handling of wheat flour and the attacks at that time were due to the ingestion of wheat.

We have seen this patient in an effort to desensitize her in order that she may continue in her chosen vocation. She gives cutaneous reaction to rice, oat, barley, and, to a greater degree, to the split proteins of wheat. It is of interest to note that the subcutaneous injection of .1 c.c. of the one to one hundred thousand wheat protein solution produced within fifteen minutes the typical hay fever syndrome, which lasted about twelve hours. Accordingly, she was started on .1 c.c. of one to one million dilution and is still under treatment.

CASE 4. White female, age 27. (W. U. D. No. A 25037). First seen in O. P. D. July 25, 1919. Complaining of asthma beginning at the age of 15 years following cold contracted in July. First thought to be due to tonsils which later were removed without relief. Has been gradually growing worse. Worst periods are spring and fall and during rainy weather but has asthmatic attacks throughout the year. Has noticed no food idiosyncrasy. Believes that goldenrod produces sneezing, and also that acute head cold or bronchitis produces her asthma; has had no urticaria. Asthmatic attacks occur about as frequently during winter as they do in summer, although the patient believes that during the fall and spring they are more severe.

Past History.—Measles, whooping cough, diphtheria, varicella, tonsillitis each winter until removal of the tonsils at 17 years. Examination discloses temperature 98.4, pulse 100, respiration 29, weight 126 pounds. Pupils react to 1. and a.; teeth unclean, many snags; pus expressed from gums; neck negative to abnormal pulsations or adenopathy; heart negative; lungs hyperresonant with diffuse musical rales; abdomen negative; extremities negative. During the first week in September this patient was found to give a reaction to oat, the wheal about .5 cm. in diameter. It was then developed that patient ate oatmeal every morning for breakfast and had done so as long as she could remember. She was seen at various times up to December 13, having been free from attacks of dyspnea up to this time. On December 13 she complained of cough and cold for one week with fever and accompanied by slight dyspnea but no paroxysmal attacks. Examination showed that there were still wheezing musical rales present throughout her chest and that there was still respiratory difficulty. Despite the fact that the patient claimed to have no paroxysmal attacks, it was

thought that perhaps she was sensitive to some other protein which was continuing the slight dyspnea and the physical findings of an asthmatic chest. At this time we had first obtained the proteins contained in the whole wheat grain and she was accordingly tested with them and found to react to wheat proteos and wheat glutenin and not to whole wheat. It was then suggested that she be given a wheat free diet. Patient was not seen again until March, 1920, when she returned and said that she had been asthma free despite the fact that she had had influenza with pneumonia. She also had several head colds but none of these had been accompanied by dyspnea. Upon elimination of the offending protein from her diet she has had a winter free from asthma for the first time in 12 years. This patient was seen September 21, 1920, and was still asthma free.

CASE 2. White male, age 25 years, first seen in the O. P. D. (W. U. D. No. 35669), November 1, 1916, complaining of asthma, onset of which occurred at the age of 16, having a gradual onset with much coryza and cough. Attacks occurred usually in the middle of the night. Attacks seem worse in winter, the last summer having been the first time he was troubled in the summer season. He had tonsils, adenoids and turbinates removed and septum straightened without effect upon his asthma. Past medical history has no bearing on his present trouble, except that he believes his attacks to be initiated by colds, sudden chilling, drafts, or walking in the park. Examination showed a spare, fairly developed white male, 118½ pounds, with a chief physical finding of expiratory musical rales diffusely scattered over his chest. The opinion of the laryngological clinic was obtained and showed a slight rhinitis. The X-ray showed considerable generalized branching, dense hilus shadows on both sides extending to the base. On November 8, 1916, he was started on injections of autogenous defibrinated blood, as suggested by Kahn and Emsheimer.¹⁰ From November 18, 1916, to January 6, 1917, he received eight injections of defibrinated blood in increasing doses. While receiving these injections he was also placed upon a high caloric diet. During this time he gained to 137¾ pounds, a gain of about 18 pounds, but had two severe and five light attacks of asthma during that time. On questioning, it developed that he had been eating on an average of about eight eggs and a quart and a half of milk a day, so that although the gain in weight was most striking and probably beneficial and occupied the foreground of his therapeutic picture, the results on his asthma were not so noticeable. On this same diet he reached his best weight on March 19, 1917, at that time weighing 145½ pounds. He was having attacks at various times, some characterized as severe, others as light, and averaging about one attack in two weeks. He returned the 28th of January, 1917, for a severe asthmatic attack, and was seen by Dr. Robinson from then on at various times. He again received a series of five injections of defibrinated blood in increasing amounts up to August 24, 1917, and this time without specific instructions as to increasing his diet, and during this series his weight decreased from 142½ to 124, and he had six attacks of dyspnea, all characterized by the patient as severe. He was again seen at various times during October and November of the same year, still having asthmatic attacks at various times. On April 29, 1918, he was seen by Dr. Bean and complained that he had again been having several severe attacks of dyspnea; from August 30, 1918, to September 27, 1918, he was given another series of five injections of defibrinated blood, during which time he had two severe attacks of dyspnea. Another period of infrequent visits to the O. P. D. occurred until July 10, 1919, at which time his physical examination was the same as on his

first observation with temperature, pulse and respiration normal, and weight of 116 pounds. It was at this time that protein sensitization tests were tried. On September 24 he was found to be sensitive to wheat proteose, glutenin, globulin and gliadin. His weight at this time was 125 pounds. He was instructed to go on a wheat free diet. He returned to the dispensary October 17, stating that he had had an attack which followed within 24 hours after the eating of a piece of pie, also stated that he had had a severe cold since his last visit, but without the usual amount of dyspnea. He had been seen at odd times and has remained absolutely without asthma on a wheat free diet. His weight on our last observation was 141½ pounds. This patient was seen September 20, 1920, and reports that he is still free from asthmatic attacks.

The symptomatology of these cases is presented in detail because they illustrate rather well the extraordinary variety of circumstances which may initiate an attack, and the danger of drawing erroneous conclusions concerning therapeutic procedures.

CASE 28. White male. (W. U. D. No. 33108.) Age 35. First seen in the chest clinic September 9, 1916, when the diagnosis of bronchial asthma was made. He was seen in the general medical clinic for the first time on September 12, 1919, complaining of hay fever and asthma, the hay fever coming on the middle of August, or shortly thereafter, the asthma extending into January and sometimes February. His complaint has extended over a period of four years. He has been unable to work in the period from September to February during this time. Cutaneous reactions were done with the pollens of the Composite only, and it was found that he reacted to rag weed, sunflower, goldenrod, and golden glow; the greater reactions being to rag weed and sunflower. He was given rag weed desensitization injections, and became asthma free by the first of November and able to go to work at that time. This was the earliest period at which he was physically able to do work in the period extending over four years. This patient again appeared April 4, 1920, with the story that he had passed through the severest attack of asthma that he had ever had. This apparently was due or at least was associated with the unpacking of china which was packed in straw. Cutaneous sensitization tests now gave reactions to timothy, June grass, corn pollen, and rag weed. He was placed on desensitization injections of timothy and rag weed. He passed through the period from April to the middle of August with very little if any asthma. Desensitization with rag weed was not considered successful because by the time the rag weed season opened we were only able to advance his rag weed injections to the one to five thousand dilution. During the season the patient had severe hay fever and asthma; however, treatment was continued. An inspection of his home surroundings was made and it was found that he was living on the edge of a large tract of land upon which the growth of rag weed was very abundant. This over-exposure to rag weed pollen probably was a factor in the production of his symptoms during the season. The patient was last seen October 9, 1920, and at that time had been free from asthmatic attacks for ten days.

This case is cited because we believe he was benefited in two successive seasons by rag weed desensitization injections inasmuch as the asthmatic feature of his complaint was

terminated several months previous to its customary ending, and also because it illustrates the fact that pollen asthmatics may have attacks of asthma during the nonpollenating season which are due to pollens.

CASE 1. White male, Age 33. Entered Barnes Hospital (Medical Number 5899 A) July 28, 1919, for paroxysmal dyspnea. Gives the history of having been short of breath ever since early childhood, with paroxysmal attacks of dyspnea usually during the summer months. Has considerable sneezing with coryza and itching eyes during this period. It was developed that in addition to his asthmatic attacks, he had caries teeth, pyorrhea alveolaris, chronic tonsillitis and simple anemia. Cutaneous skin reactions were obtained to the pollens of red top, rag weed, and goldenrod to the greater degree. At this time he was placed on desensitization injections of rag weed and became asthma free during the last week in August and remained so until the first week in June, 1920. During the present year, commencing June 24, 1920, until September 13, 1920, he has been receiving desensitization injections of red top, rag weed and goldenrod. During these three and one-half months he has had four attacks of paroxysmal dyspnea, characterized by him as severe because he required adrenalin for their relief. The period of freedom this patient had from the end of August, 1919, to the first of July, 1920, was his longest asthma free period in the course of his disease; the present season he considers as being the lightest that he has ever had.

CASE 14. White male, Married, Age 29, Barber. (W. U. D. No. A 29355). First seen October 23, 1919. Complaining of hay fever and asthma for past eleven summers. Onset, sneezing first week in May with increasing intensity of symptoms until July when attacks of paroxysmal dyspnea are added to his discomfort. Asthmatic attacks worse at end of July and early August but are present into the month of September and sometimes as late as October. Cutaneous skin reactions were obtained to pollens of red top, timothy and June grass, which also is the order of the intensity of the reaction.

During the first week in April, 1920, desensitization injections of red top and timothy were commenced. Treatment was continued throughout the season, receiving the last injection September 22, 1920. This prolonged course of treatment was deemed necessary because it was impossible to give this patient any injections of the lower dilutions of the pollens without obtaining a local reaction.

This patient had no asthmatic attacks during this season. The hay fever symptoms commenced June 18, 1918, and continued in a mild form throughout the season. The patient considered this his best season since the onset of his complaint and the only one that was free from asthma.

CASE 23. White, housewife, Age 33. First seen in an asthmatic attack September 22, 1919. Gives a history of isolated asthmatic attacks for last four years. Is fairly certain that the attacks occur between May and November and to the number of four or six. Does not consider herself as having hay fever, but does have frequent head colds during the summer months. Cutaneous skin reactions were obtained to red top, timothy and rag weed.

This patient was seen May 25, 1920, in another asthmatic attack, having been free from attacks in the interim, and gave a history of this attack being preceded by sneezing, coryza and itching eyes, over a period of three days. Desensitization injections of red top and rag weed were accepted. There have been no asthmatic attacks up to November 3, 1920, but while under treatment it was observed that mild

but unmistakable hay fever symptoms were present at various times.

The foregoing case and two others that have just come under observation this season with similar histories and clinical course, lead one to believe that there may be asthmatics giving cutaneous reactions to pollens in whom the asthmatic attack is the major symptom, while the hay fever symptoms are given some other pathological term or are so mild or variable that they are considered of no consequence.

I wish to call attention to a clinical observation concerning the character of asthmatic attacks. In these sensitive cases it appears that the first symptom noted by the patient is a tightening of the chest, followed by increased inspiratory difficulty but far more difficulty with expiration; expiration being more labored and prolonged. At the height of the attack a cough may develop which eventually becomes productive and then the attack begins to subside. There is no definite history of the attack following bronchitis, although these patients have associated their attacks with fresh colds, change of weather, menstruation, dust, fatigue, et cetera, but since refraining from the ingestion of wheat these patients have passed through the various episodes without their usual attacks. In those cases which do not react to any protein or pollen the asthmatic attack appears to be initiated by a cough which increases in severity and frequency, thus producing dyspnea, which is usually relieved by the expectoration of a tenacious sputum. The difficulty seems to be chiefly with inspiration. In these cases the history is of long standing coughs or colds which are subject to exacerbations and accompanied as a rule by asthmatic attacks. It is thought that the accumulation of secretion and consequent bronchial obstruction by this exudate, initiating the cough stimulus, produces the respiratory difficulty in these cases, rather than a primary constriction of the bronchial musculature due either to central or peripheral foreign protein irritant.

Another point has been noticed in those patients giving cutaneous reactions to pollens: it is not infrequent to have them report isolated attacks of asthma during the winter months; more frequently than not these attacks follow some unusual household activity. In the absence of other causes it is probable that the pollen present in the undisturbed dust is still potent and produces the attack.

We feel rather certain that the immediate etiological factor has been determined for these patients, and that the study of essential bronchial asthmatics along the line of protein sensitization will explain many of the bizarre

and extraordinary features which characterize the disease.

Humboldt Building.

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CHILD HYGIENE IN MISSOURI*

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Nothing reflects more searchingly on the character of a state than the methods used in supervision of its young. The manner in which children are brought into the world, nourished, supervised, trained and inducted into the responsibilities of maturity, is in truth the best measure of the civilization of a race.

It has long been realized that among all modern peoples—this nation and others—a large proportion of children born were dying needlessly and other large groups were vainly being wasted by unnecessarily damaging circumstances. A recognition of these most appalling conditions has been the inspiration for a great deal of constructive legislation and continued effort of national and state civic organizations in child welfare.

Following the progress of other states Missouri enacted legislation favoring the children of the state. In 1918 it created a Division of Child Hygiene in the State Board of Health. The legislators were indeed wise in this. They were, however, extremely short-sighted when they failed to appropriate funds for the functioning of this division.

Congress has for some time appropriated moneys for investigation and study in child hygiene and this has been used throughout the country for such purposes. It was fortunate for Missouri that federal funds were available for investigations and demonstrations.

Realizing the existing deficiency the state board of health by resolution and through the acting governor, invited the U. S. Public Health Service to assist the state.

On entering the field the Public Health Service through its Division of Child Hygiene proposed to carry on field investigations for the purpose of obtaining data relative to maternal and infant mortality and to study economic conditions bearing on it.

It proposed to carry on demonstrations, pointing out proper standards for medical inspection of school children with its attendant followup work; health supervision of expectant mothers, infants and children of the preschool age; and the establishment of health centers for this work.

It proposed to assist local communities and stimulate them with the idea that health of the children is a community problem.

Lastly, it proposed to organize a division of child hygiene under the existing law.

In establishing this division the co-operation and coordination, under this division, of all existing health agencies working or contemplating working in child hygiene, was sought.

It was the function of the Missouri Tuberculosis Association to detail field agents for organizing purposes and to assist in state-wide publicity.

The American Red Cross agreed to furnish nursing services in carrying out the projects.

The Agricultural Extension Service of the University of Missouri detailed its home demonstration agents to conduct or assist in nutrition clinics in schools.

The Parent-Teachers' Association lent valuable aid in volunteer local work in the schools.

The W. C. T. U. furnished the division with a multigraph and developed the "Big Sister to the Expectant Mother" idea.

The medical and dental professions gave valuable aid in the actual physical examination of school children and donating time to clinics and health center work.

Throughout local communities central health committees were formed. These committees were composed of local members of the respective state organizations and it was through these councils that success in the work has been obtained.

The projects undertaken throughout the year have been:

Stimulation of birth registration, field investigations and demonstrations in selected communities; school survey with special stress on the formation of nutrition clinics for undernourished children; formation of health centers for supervision of expectant mothers, infants and children of the preschool age;

*Read at the meeting of the North Missouri Medical Society, Shelbyville, June 22, 1920.

general health education propaganda through press, distribution of literature and lectures.

Results.—On account of the enormous expanse of the state, our limited funds and the impossibility of obtaining many trained workers on short notice, the projects are confined to those localities which offer the best prospect of establishing the work on a permanent and self-sustaining basis.

To date twenty-five towns have had a school survey consisting of height and weight taking, physical examinations with their attendant follow-up work to obtain the correction of physical defects and nutrition clinics. Approximately 35,000 children have been examined.

In eleven towns health centers have been established and equipped and funds appropriated for a permanent nurse.

Four counties were selected as demonstration centers, the staff acting primarily as a full time county health organization. Each unit consisted of a woman physician, trained in public health work and especially child hygiene, two or more health nurses, nutrition specialists, trained school workers and field investigators. In these counties the full program has been commenced.

The nutrition clinics have been an especially interesting and helpful feature. Instead of class work, individual mother and child clinics have been held. The mother of the underweight child is invited to the school. The nutrition worker sits down with the mother and the child and has a confidential talk. The object of having both mother and child is that one serves as a check on the other and more reliable information is obtained. In individual clinics, the mothers will give information and ask questions that they would not do in the presence of other mothers. The details of the child's habits are brought out and the nutrition worker gives written suggestions as to how to improve the child's physical condition. Not only are the habits of eating, sleeping and exercise discussed, but also attention is called to the physical defects, for the nutrition worker has the report of the physical condition and can explain to the mother the necessity of having the defects remedied.

The physical examinations have demonstrated to the communities the need of further work. Even the leaders have been surprised at the conditions found. In one community, above the average socially, forty-eight cases of trachoma were found in a school of 350 children, probably brought in by a few children.

Continued Activities.—It will be the purpose during the summer to establish health centers in those communities which want assistance and are interested in such work. It is the aim of the division to have established

in each county a public health nurse, specially trained in child hygiene. It wants the active co-operation of every member of the medical and dental professions.

It intends to continue physical examination of school children and further standardize methods. It expects to stimulate birth registration so that Missouri will come within the birth registration area.

In the supervision of prenatal work there has been prepared a series of prenatal letters which will be sent free to all expectant mothers on request. These letters give, in a concise form, the general care of the expectant mother, such as advice regarding diet, exercise, bathing, etc. The advisability of engaging her physician early and of having frequent examinations of urine is impressed. Cards are being prepared to be distributed by physicians and social workers which they may give to expectant mothers. Co-operation of the medical profession is requested and we believe all this work will be of mutual benefit. Our aim is to promote by educational methods the health of mothers and children and decrease preventable mortality.

One of the most effective measures has been the establishment of health centers. The average young mother has had no opportunity to learn how to care for her baby in a correct manner. Her little knowledge has been gained through neighbors, who in turn have learned in the same manner. For some unexplained reason motherhood is the one profession that has not been placed on a scientific basis. At school a girl has an opportunity to prepare herself for every profession except the one she most likely will follow. Is it any wonder that one out of every ten babies born in the United States dies before it is a year old and that a large percentage of these might have been prevented by proper care?

A baby health center is essentially a place where young mothers can come to learn how to care for their babies and to which they can bring these babies to be examined so they may know if they are thriving as they should.

The establishment of a baby health center is very simple if a few definite steps are followed. The first step is to form a committee consisting of one representative from each organization in the locality that is interested in child welfare, such as the medical profession, the dental profession, the Red Cross, local nursing organization, commercial club or chamber of commerce, woman's club, boy scouts, church organizations, local tuberculosis association, local parent-teachers' association, W. C. T. U., etc. This committee may be called together by any interested person and proceed to form a temporary organization by

the election of a temporary chairman and secretary.

The next step, which may be taken by a sub-committee of this central committee, is to obtain two or more rooms in a central location for a health center. In the beginning two rooms will be adequate, but as the work progresses more room will be needed. If only two rooms are to be obtained, one should be considered the waiting and class room and the other the examining room. Frequently these rooms can be obtained in the county court house, city hall or schoolhouse, so there will be no question of rent. If it is necessary to pay rental for the room the committee should secure funds to guarantee the rental for one year.

The third step is furnishing the rooms. Usually the various organizations will each furnish a certain part so that it will not be necessary to raise funds for this purpose. The waiting room should be provided with a number of plain chairs. The inner rooms should have scales, a table and three or four chairs. It is economy to purchase good scales in the beginning; balance scales are more satisfactory than spring scales, as the latter are not accurate and are more liable to get out of order. Several firms now make special scales with measuring rod which are very satisfactory for health centers. The price is about \$30. This is the chief expense of the furnishings. The table may be a plain kitchen table. It is used to lay the baby on while examining it.

In the beginning it is well to limit the activities of the baby health center to three afternoons a week. One afternoon should be devoted to baby clinics, one to classes for young mothers and one to classes for expectant mothers or prenatal clinics.

Baby Clinics.—One afternoon a week should be set aside for examination, weighing and measuring of babies and children of preschool age. This work should be conducted by a physician assisted by a nurse. The first time a baby is brought to the clinic, it is weighed, measured and examined thoroughly. Advice is given as to the care necessary and definite appointment is made for the next visit, usually in two weeks. All mothers attending these clinics are urged to attend the classes on the care of babies.

Care of Babies.—Classes for young mothers are held once a week. An outline of lessons suitable for these classes will be furnished on request. These classes should be conducted by a nurse.

Prenatal Classes.—These are classes for expectant mothers and should be conducted by a nurse or a woman physician. An outline of lessons that may be followed will be fur-

nished on application. The mothers attending these classes should be enrolled to receive the prenatal letters.

The Nurse.—If there is not a community nurse the central committee should take steps to obtain one. This nurse should be a qualified public health nurse and should be given general supervision over the health center activities and may conduct the classes. In many communities there are graduate nurses who have married and given up professional work but who would willingly give one afternoon a week to child welfare work. One of these nurses should be given charge of each activity of the health center under the direction of the public health nurse. The work of the public health nurse does not end at the health center for later she visits the homes to see that the instructions given at the clinics have been carried out and also to give additional instructions in regard to living conditions. It is very important that the community nurse should have had special training in public health work or experience in conducting a health center, otherwise she will be unable to direct and coordinate the work of the volunteer assistants.

The Doctor.—Of course, the ideal plan is to have a full time trained public health officer who devotes part of his time to the health center. However, this usually comes as a later step in health activities. In the formation of the central committee the local physicians and dentists should be invited to send a representative. These two professions have always been very generous in giving their time to help with all health activities and without doubt the physicians will arrange that one of their number will attend the baby clinic regularly. It may be this work will be assumed by one physician leaving the others free to give their time to later activities of the health center, such as the tuberculosis clinic, the venereal disease clinic or whatever seems most necessary in the community. The dentists no doubt will arrange for dental clinics.

It is important to keep accurate records of the children examined at the clinics. For this purpose the United States Public Health Service provides printed cards which will be sent on application when the health center is established.

One step at a time, leaving the next to be decided on after the first is assured and when the need is seen, should be the plan followed. After the health center is equipped with the essentials it may be made as attractive and artistic as the local organizations desire. Good pictures, dainty curtains and pots of flowers all have an educational value and may be provided by the various organizations interested. A loan library of health literature may

be started and should include books on the care of the babies and personal hygiene for women.

If the examining room is not provided with running water a wash basin and pitcher will be needed. Additional equipment may be added, such as a tape measure tacked on the table for measuring babies, and wooden tongue depressors. Large paper napkins or towels should be provided so that a fresh one may be placed on the table before a baby is examined.

An exhibit of baby clothes and nursery equipment is practical if the room permits. No doubt the local merchants can be interested in loaning or giving the necessary articles. The more people in a community who become actively identified with the health center work the more likely it is to be permanent and of definite value to the community.

The child welfare work can well be the entering wedge for health work in any community, but before long the need of more extensive work will be seen.

In any community the progress of the work depends to a great extent on the funds available. So far the child hygiene work in the state has been carried on by funds appropriated by the United States Public Health Service. The original appropriation ends July 1 and after that time the force is to be much curtailed, as so many other states have requested help from the Public Health Service that it is considered that Missouri already has had her share of funds available.

If the work started is to be carried on it will be necessary for the next session of the legislature to appropriate funds for its own division of child hygiene, as well as other divisions of the health department. The present state board of health has organized this department along recognized lines and it is to be hoped that this work will be upheld and extended by an adequate appropriation for health work. It rests with the medical profession in large measure to bring this subject to the attention of the members of the legislature. Physicians have been too prone to keep out of legislation, often misconstrued as politics, but unless they become active they will find that they must conform to laws which have been dictated by those who have not given the subject proper study and investigation.

ANEURYSM OF THE INNOMINATE: REPORT OF A CASE

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On July 24, 1920, I was called to Mrs. H., aged 80, white, blonde, well nourished, mar-

ried 46 years, mother of three children. The oldest child, a son, died of Bright's disease at the age of 34; the other two are living and in good health. The patient has never been acutely ill except from slight indigestion. Labors have been normal, but since the death of her son she has been somewhat melancholy; not morose, but inclined to look on the dark side of events with gloomy forebodings. For years she has urinated two or three times during sleeping hours. There has never been any edema of the lower extremities. She has marked pallor extending from the tip of the nose to the angle of the lips on both sides and to the depression midway between the chin and lower lip, completing a white zone surrounding the mouth which is in marked contrast to her general complexion. The heart and lungs appear normal.

At the first visit her temperature was 104 F. with the usual complaint of malaise. Her pulse is full, soft, regular and beats 100 per minute. The lower teeth are absent, upper are present. She has pyorrhea; no history of tonsillitis. Her fever gradually fell by lysis, disappeared for two or three days, then rose to 100.5 to 101°, to disappear again and then repeat itself. Her tongue became dry and coated; she was given calomel and put on dilute hydrochloric acid with tincture of nux vomica and essence of pepsin and the tongue became moist and clean. She has constipation and prefers epsom salts which she takes every morning. Once she went four days without fever when in spite of quinine the temperature reached 100.5, again disappearing in two days. At times her pulse was very irregular, would remain so for several days and then would become regular under aromatic spirits of ammonia, tincture of digitalis and strophanthus in syrup of cinnamon. She was also given one-thirtieth of strychnine sulphate every four hours for the irregular pulse. She has slept the greater part of her four weeks' illness, is easily aroused but would fall asleep while one was talking to her. Her respirations have been regular, never exceeding thirty per minute; sometimes they were noisy from mucous in the air passages and occasionally she coughed, but failed to expectorate on account of debility. Litmus paper in the mouth showed a slightly acid condition; she never had hyperpnea or much yawning, but the mental heaviness continued for fully four weeks. The urine has been normal in amount, highly colored and cloudy; no sugar, no albumin, no tube casts.

One evening when the pulse was very irregular and she was lying on the left side and facing me I discovered a marked throbbing just above the sterno-clavicular articulation on the right side. On examination by pal-

pation I found a tumor, tube-shaped, of the size of one-half of a hen's egg, which can be traced until it disappears beneath the clavicle. It proved to be an aneurysm of the innominate. A few days after this the Vernon County Medical Society was in session and Dr. Charles C. Dennie of Kansas City was present. I asked him if he would like to see an aneurysm in this location. He said he would, gladly. He examined the tumor and agreed with my diagnosis. No pressure symptoms exist. Just what if anything the aneurysm had to do with her sleeping I am unable to determine. Her pupils are normal, reflexes respond, no Kernig, ankle clonus, or Babinski. At one time she had some hypostatic congestion of the lower lobes of both lungs in spite of directions to avoid sleeping or lying much on the back and she was kept in the Fowler position or on her side as much as was comfortable for the same reason.

The report of this case is made at random as no trained nurse was employed; the patient is nursed by her two daughters and her husband and bids fair to recover from her illness. The final result of the aneurysm is problematical as an operation for cure is scarcely suggestible and probably unacceptable in one of her age and condition. The prognosis of her present illness is favorable, but the reverse as regards the aneurysm.

EPILEPSY A SYMPTOM OF SPLANCHNOPTOSIS.—In a paper read before the Southern Surgical Association, December 16, 1920, Dr. Chas. A. L. Reed elaborates his theory on this subject, the following abstract presenting his latest views:

The fact that chronic convulsive toxemia, usually called epilepsy, is constantly associated with displacements of the abdominal organs has now been demonstrated in 810 consecutive cases in my own hands. This demonstration has consisted of, first, the clinical history and, second, the physical examination of the patient; third, the serial x-ray study, and, finally, in the vast majority of instances, the surgical exploration of the abdominal cavity. This record, showing the additional and significant fact that the visceral condition is always antecedent to and associated with the convulsion phenomena, as shown by the earlier development of constipation, and the absence of both hereditary factors and extra-abdominal lesions, forces the conclusion that so-called epilepsy occurs only as a symptom of splanchnoptosis. This conclusion is further confirmed not only by my own observation but by the daily observation of every general practitioner to the effect that epilepsy is always associated with constipation; that the epilepsy is worse when the constipation is worse; and that the most effective, ready-at-hand relief from seizures is offered by laxatives. It was this fact, confirmed by surgical experience, that prompted me to write my first article on the subject under the title of "Constipation and Epilepsy," and upon which I based my second article entitled "The Probable Cause and Logical Treatment of Epilepsy." My later experience recorded in subsequent reports, has shown that constipation while antecedent to and associated with the seizures in these cases is, like the seizures themselves,

a symptom of splanchnoptosis. The mere fact that many people who have splanchnoptosis do not have so-called epilepsy does not and can not in the least invalidate the observed and here recorded fact that eight hundred and ten people who did have epilepsy likewise had splanchnoptosis and that the development of the splanchnoptosis was antecedent to the epilepsy. The explanation of this difference, which will doubtless sometime be furnished through biochemic research, is something with which I have no concern in this connection. I am simply interested at this time in the basic fact, namely, that epilepsy is always associated with and is therefore a symptom of splanchnoptosis.

The basic fact, here affirmed, is susceptible of verification at the hands of every practitioner who sees these cases and especially by every institution now acting in a custodial capacity to large groups of these unfortunates. To begin with, the cases must be examined—really examined. This means that a thorough history must be taken. Then the patient must be stripped. The physical inventory should be carefully made, front and back, from head to foot. Special search should be made for possible foci of infection, not as primary but as ancillary factors in the case. The abdomen should be gone over, first, with the patient on his back; next, with him erect. A very little practice with abdominal percussion will enable the physician to detect the gastric note, the cecal note, the transverse-colonic note, sometimes the sigmoidal note. With the patient on his back, these notes will generally be found approximately in their normal positions, with the possible exception of the cecal note which in these cases will always be found low in the right lower quadrant, sometimes as low as Poupart's ligament. Now stand the patients up and it will be found that all of these notes, these separate areas of resonance, will have become obscured, more or less blended, by gravitation into the lower zone of the abdomen. The only note that does not thus migrate downward is that of the cardia which, however, is generally farther around to the left and toward the back. In other words, the viscera will have dropped. This examination is all very easy—and very, very important.

Then all cases, especially in the present status of the whole question, should be given an x-ray study. When this study is done right it is very clarifying; when done wrong it is very misleading. It is done approximately right when the following rules are observed: (1) The patient should be free from all laxatives or enemas for at least twenty-four hours before taking the barium meal; (2) the barium meal should be taken at 9 o'clock in the morning; (3) the first picture, to show the stomach and beginning duodenal transit, should be taken ten minutes later—with the patient upright; (4) the second picture, to show conditions at the ileo-cecal juncture, should be taken at 3 o'clock in the afternoon—with the patient prone; (5) the third picture, to show the condition and position of the colon, should be taken at 9 o'clock the next morning—with the patient upright. These pictures are essential; others (after ingestion) to show (a) completed transit or (b) relative positions of colon prone and standing; or (after enema) to show (c) redundancy or not of the sigmoid; (d) ileo-cecal competency or not; or (e) other conditions, may be taken or not according to the indications of the individual case. Of course, decensus of the liver and kidneys is not shown by the x-ray but may be detected by careful palpation in different positions.

The ease with which all of this can be done, and the importance of the facts thus elicited, make such examinations of these cases an imperative duty not only for individual practitioners but for institutions. I can not resist this opportunity to insist more especially upon the duties of institutions in the premises.

THE JOURNAL

OF THE

Missouri State Medical Association

JANUARY, 1921.

EDITORIALS

TYPHOID EPIDEMICS IN MISSOURI

The recent epidemic of typhoid fever at Salem, Ohio, where 650 cases and many deaths occurred from accidental pollution of the water supply of the city, has called the attention of the entire country to the dangers of insanitary conditions. The continued existence of this entirely preventable disease however indicates that the people as a whole are slow to take heed and to learn from the experiences of others.

The Missouri State Board of Health, aided by the U. S. Public Health Service, has had occasion to examine water supplies of various places in Missouri and has found many of them grossly polluted. In many places conditions have been found which make an epidemic of an intensity equal to that of Salem not only easily possible but, unless improvements are made, eventually probable.

Epidemics of typhoid fever have recently occurred in a number of Missouri cities and towns traceable to polluted water supplies. One epidemic was due to a break in the water purification apparatus and was promptly checked by a correction of this break. Another, that of Campbell, was due to pollution entering the reservoir through cracks in the concrete walls, and was checked by repairs to these walls.

Recent outbreaks of typhoid and other water-borne diseases have been noted at Leeper and Burlington Junction, where examination of the water used by the patients has shown it to be badly contaminated. It is hoped to have a public water supply at the latter place soon.

The conditions obtaining at these places are duplicated in many other places in Missouri and the wide-awake and up-to-date cities and towns throughout the state are taking steps to improve their own conditions immediately, while the state board of health is seeking to have its sphere of usefulness increased by the coming legislature in order that it may effectually combat these conditions.

Water is an article that the people must have and it must be as free from impurities as modern scientific methods can accomplish in order that the health of the public may be

safeguarded. Progressive communities have realized their responsibility in this matter and have installed purification plants with a competent sanitary engineer in charge of the water-works department. In such communities the typhoid rate has always dropped and with it there has been a lowering of other disease incidence. Missouri has thus far neglected the protection of its citizens against water-borne diseases and therefore the state is one of the most backward in the country in this grave matter notwithstanding the warning of the state board of health and its efforts to establish a bureau of sanitary engineering in the state department of health with a competent sanitary engineer at its head to assist counties and towns in their efforts to improve sanitary conditions.

The state board of health will renew its efforts in this direction and will introduce a bill at this session of the legislature asking for authority to conduct such a bureau as mentioned in the foregoing and request appropriations to employ a sanitary engineer and establish an effective system of inspecting the water supply of the people in every community in the state not now safeguarded, so that epidemics of typhoid may be prevented. Such a bureau would be serviceable to every community in other directions besides water inspection for it could through local health officers assist in the abolition of many insanitary conditions without financial wastage and thus prove an invaluable adjunct to county and state departments of health in promoting community health. When the bill is introduced in the legislature we hope the county societies will support it and invite the support of the people so that Missouri may take its proper place among the states that are zealous in guarding the health of their people.

THE FIRST COUNTY GENERAL HOSPITAL

The Audrain Hospital at Mexico, which has just been opened for the reception of patients, is the first county general hospital to be built under the law passed by the last legislature permitting counties to vote a bonded debt for the building of such institutions.

This hospital and the very handsome vote by which Audrain County approved the bond issue was the direct result of the work of the Mexico Hospital which was opened on December 4, 1913, and conducted by local physicians. The need for such an institution had impressed itself upon certain citizens of Mexico for some years and much discussion finally resulted in an attempt to finance the proposition. Subscriptions to capital stock were first secured

totaling \$3,000 and a building was rented. The public was then appealed to and gifts from fraternal orders, church societies, women's clubs, and individuals, sufficed to remodel the building and furnish and equip the hospital. Maintenance was provided by pledges of \$20 annually from each of a hundred citizens. The business acumen and the untiring energy of Mr. A. P. Green, Chairman of the Board, was probably the greatest factor in the early success of the hospital, while the efficient management and economy of Miss Sarah H. Reitz, R.N., the first and the present superintendent, gave the institution its reputation for good service and economical management. She has never spared herself where there was a question of service to the public, of good for the hospital, or the upholding of high ideals.

The Mexico Hospital has just vacated its quarters to move into the new building of the Audrain Hospital. During the seven years of work it has cared for 1,930 patients, 662 of them since November 12, 1918, when the County Court accepted the offer of the stockholders of the Mexico Hospital to donate to the Audrain Hospital all the equipment, supplies and resources of the Mexico Hospital, and since that date the institution has been known as the Audrain Hospital and managed by a board elected by the people of the county.

Bonds to the amount of \$75,000 were voted on April 5, 1918, and as proof of the educational value of the community hospital which had been functioning for less than five years, the vote was more than eight to one in favor of the bond issue. It was the first bond issue that ever carried in Audrain County. When the constantly increasing cost of both labor and materials made it impossible to complete the building within the amount voted the citizens voted an additional \$40,000 by an increased majority.

The building is fireproof, of reinforced concrete and brick, and with furniture and equipment represents an outlay of nearly \$150,000. It has thirty-five beds for patients, quarters for nurses and attendants, and is well equipped to serve the county and adjacent territory. Large sun parlors on each floor, electric elevator, and all the conveniences usually found in a modern hospital, are provided.

The operating suite, which can be closed off from the rest of the building, consists of two operating rooms, supply room, surgeons' wash room, nurses' wash room, anesthetizing room, and sterilizing room. All these open into a circular hall and are very conveniently arranged for rapid, clean and efficient work. Floors in the operating suite and all halls above basement are terrazo while the floors in the rooms are of oak.

It is the purpose of the board to conduct

the hospital on approved lines, standardizing the work so far as local conditions and legal forms permit, keeping always as their goal and purpose the good of the patient and service to the community.

TREATMENT OF TUBERCULOSIS

As years roll on and on the number of so-called "cures" for tuberculosis increases, and the hopes of the profession, the public, and the patient, are shattered just as often, so often, indeed, that any new remedy is now only lukewarmly received. When a remedy is tried for years with definite results by strictly scientific men in various parts of the world, a remedy that actually destroys the bacillus and brings back the bloom of health to faded and worn-out thousands upon thousands of tuberculosis sufferers, then will we feel that at last the goal is won. When will this tuberculosis millennium occur? Alas, as yet nothing has been found that has justified the claim of discoverers, so that we must continue to use the remedies and treatment that time has proved are beneficial.

The remedies in tuberculosis are as follows: 1, Rest. 2, Climate. 3, Heliotherapy. 4, Tuberculin. 5, Pneumothorax. 6, Drugs.

(1) *Rest* thus far is the only treatment, with or without drugs, when properly directed by competent medical advisers, that has proved the most successful in combating the effects of tuberculosis.

(2) *Climate* plus rest is even better than rest alone; but it is well known that any climate is satisfactory if the patient is out of doors.

(3) *Heliotherapy* is divided into two kinds, natural (sunlight) and artificial (quartz lamps); the latter has not proved of great service, while the former is only of service when rest and climate are combined with it.

(4) *Tuberculin* is a remedy that was at one time considered to be a cure, but we now know that it is of decided benefit in relatively few cases. As a general treatment it has been almost discarded.

(5) *Pneumothorax* is a generally known treatment used by specialists in properly equipped institutions, which of course restricts its use in one-sided tuberculosis cases. It has been of great service, but there are certain drawbacks on account of complications that make its use limited.

(6) *Drugs*. There is *no one drug* that will cure tuberculosis. There are many that have been of decided benefit in the treatment.

A patient has other organs besides lungs which need attention. In a word, the treatment of tuberculosis consists of the combination of many kinds of remedies, which when

judiciously used will bring relief and cures to many thousands of sufferers. If we find our cases early the chance of cure becomes greater.

The handmaid to the cure of tuberculosis is *early diagnosis* and this can be accomplished by education of the public and the profession. If this does not bring the tuberculosis millennium it will at least be a great step toward it.

THE DIPHTHERIA EPIDEMIC

While always prepared to call a halt in these columns to the obsessed rationalist of modern medicine who refuses to consider anything but a germ or a serum as a logical therapeutic measure, we must not overlook the fact that certain serums and vaccines have given splendid accounts of themselves as reliable therapeutic agents in the curing and prevention of disease, and foremost in fact the pioneer among them stands the antitoxin of diphtheria. There are few diseases that have less excuse for going on a rampage than the infection of diphtheria. It is safe to assert that in the light of modern research and experimentation no biological product has undergone the severe and exacting tests to which the diphtheria antitoxin has been subjected, or produced such excellent results.

Necessarily there are many things of a speculative and empirical character in a field embracing the vast scope of medicine, but certain it is that the prompt administration of diphtheria antitoxin in proper dosage has seldom failed to accomplish its purpose. In most instances where cases have been lost after the administration of the serum an investigation will usually reveal delayed injection of the antitoxin, too small doses, or the presence of another infection concomitant with the diphtheria. Many a life has been sacrificed to the dilly-dallying methods of phlegmatic practitioners waiting for the return of the culture tube from the bacteriological laboratory when the symptoms were sufficiently tangible to justify antitoxin treatment.

In the present epidemic we have a further advantage in combating an infection that oft-times assumes such virulent aspects. We now have at our disposal a toxin-antitoxin sanctioned by the most authoritative investigators and accredited with producing an immunity lasting from three years upward. Since the control of diphtheria is a public health question, health officers should establish stations where physicians are employed to administer the serum free of charge and a stock is kept for rapid distribution, while school boards should distribute information to pupils and parents on the value of the Schick reaction and the utility of the serum.

JOHN BURROUGHS AND THE GREAT UNKNOWN

The noted naturalist needs no introduction. His quaint patriarchal personality is known to all. John Burroughs has been with us for over eighty-three years and has in one sense at least come to be regarded as a national institution. He has brought to busy Americans the wonders and revelations of the wilderness and its inhabitants. His writings teem with poetic beauty. So long as Burroughs was content to dwell in the realm which destiny has allotted him, the wonders of which he has shown himself so ably fitted to speculate on, so long has he elicited naught but praise and admiration from nature lovers throughout the civilized world. But in his recent writings Burroughs has been disclosing a distinct philosophic trend plainly denoting himself an agnostic of decided type, without, however, permitting this conclusion to alter his genial poetic temperament. Such deduction from such source causes one to halt in consternation and wonderment. Once again there has appeared the great inconsistency of a generation. One who has verily lived for eighty odd years in the heart of Nature among the most beautiful specimens of the Master's art and should by logical deduction be among the foremost to sustain the Supreme Intellect, turns instead to the path beset with doubt and questions the existence of any such Entity. Therefore, we seek to analyze in a somewhat cursory manner the reason for this desire to intensify the already great shadow clouding the finite mind, albeit we approach the task with the diffidence becoming the "pupil" seeking to sit in judgment on the master; for such, John Burroughs surely is.

The formidable problem involving life and the future has elicited interesting and variously divergent responses from the great minds of all ages. Balzac emerged from the herculean task smilingly. He had probed the depths of the weaknesses besetting his degenerate age and yet remained untainted from the cynic's spear. Moliere felt the iron, and became melancholic and cuttingly satirical. Rousseau drained the cup, and his despondent misanthropy gives evidence that the dregs were bitter indeed. The grim and sardonic Carlyle sought to escape the eternal quest engendered by the cosmic urge, by concentrating his energies toward the search for an idol formed of human clay; so for fourteen years we find him analyzing Frederick the Great. Then, failing in his design, he dips his pen for the final admission and writes in the bitterness of defeat: "Frederick was a man who but succeeded in escaping the rottenness of his age." Small wonder then that his irony became more penetrating, his satire and cynic-

ism the keener and more pungent. The superhuman mentality of Darwin indulged in agnosticism for a short time only. In the end he acknowledges the Guiding Hand. Voltaire remained consistently and severely agnostic up to the very end to take his "leap into the dark."

The case of Burroughs is intensely interesting since he divulges what to our mind appears to be a clue to the reason for his trend of thought. He has been so deeply immersed in nature and in such perfect harmony with "her most invisible thoughts" that he has fairly straddled the limit of finite conception—or thinks he has, and therefore now wears a chip on his scientific shoulder because, forsooth, Deity fails to make an exception in his case and divulge to John Burroughs the secret of His art. Another phase which arrests our attention is the fact that most of the world's great agnostics became so long before the nocturnal period of their mundane existence.

There is, however, no possibility of disqualifying the premise of Burroughs' deductions. The trend of his reasoning is so calm and keenly alert that it leaves no room for finite controversion and the strongest epithet that may logically be hurled in its direction is that of being arbitrary. For example, who will deny the plausibility or justice of his contention in the following abstract taken from his essay "Is Nature Without Design?" (*North American Review*, May, 1919): "Religion in some form is as natural to man as eating and sleeping. The mysteries of life, and the wonder and terror of the world in which he finds himself, arouse emotions of awe and fear and worship in him as soon as his powers of reflection are born. In man's early history, religion, philosophy and literature are one. He worships before he investigates; he builds temples before he builds school houses or civic halls. . . ."

For clarity and continuity there is no gain-saying the argument. Burroughs is utilizing here a weapon which is invincible. Quite true that organized religion has from time immemorial endeavored to obviate this line of reasoning, but as for methods utilized and the results attained we do not consider this the proper time for discussion. Many there are no doubt who will gloat over the assertions of Burroughs. His philosophy, however, does not harmonize with the deductions on which our attitude toward life is based. With the hereafter we are frankly not concerned. We choose not to cogitate about the goal. We feel like the runner in the marathon; his duty is plainly before him, therefore he does not stop

to analyze his emotions anent the nature of the destination; he has been entered in the race by an umpire who has passed on him; his object is to utilize his energies and skill in a manner calculated to bring him "home" in record time or as nearly that as is consistently possible. It is only natural therefore that he look with suspicion on anyone seeking to deter him from believing that the race is being conducted in a fair and proper manner. And so must we all regard the agnostic of the past, present and future, who intrudes with iconoclastic sophistry and captious reasoning without bringing us a whit nearer to the philosopher's stone.

Burroughs has been in the "race" a long time, therefore he is trying to reason himself into the belief that there is no Umpire—manifestly a faulty conception. In a later passage in the above quoted essay Burroughs admits that there is a "Primal Mind." He then goes on to deny that mortals are distinct entities but concedes that they are all a part of the "Creative Energy." The old pantheistic theory in fact relashed and the pendulum swung to the opposite extreme of the Emersonian hypothesis. And then he proceeds to quote Whitman: "I have positively appeared; that is enough." Which is obviously doing the "Good Grey Poet" an injustice since Walt Whitman was not essentially agnostic, although a cursory reading of his works might cause one so to deduce. John Burroughs has missed the great point in mundane existence. The human personality is an abstruse complexity of at least two phases, and Burroughs has developed one of these factors to the point where the spiritual side has dwindled to an infinitesimal minority termed agnosticism, which in the final analysis, of course, means nothing at all. In fact, organized religion has "gone agnosticism one better" when it "created" heaven and hell, for here there is at least nothing left to conjecture; if you are "good" the white globe says "up." If the reverse, then the red one signals "down."

After perusing Burroughs' essay one feels that the author has conducted him to the "theatre" and left him standing there without sufficient funds to enter. Who cares for such guidance? Doubt and skepticism are plausible when they lead to something constructive. Agnostics of all ages have exemplified to a marked extent the much ado variety of philosophy with never a tangible outcome; in fact, they are strongly suggestive of the passage in the Roman satirists' lay: "*Parturient montes, nascetur ridiculus mus.*" (The mountains are laboring, there will be born a ridiculous mouse.)

A CORRECTION

The comment in our last issue under the caption "Protecting Child Health" stated that "the most interesting paper in the joint session of the American Child Hygiene Association and the Central States Pediatric Society at St. Louis, October 11-14, was read by Dr. Louis H. Hempelmann of St. Louis." The paper was read by Dr. Theodore C. Hempelmann.

BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind
and strengthens the mental grasp*

THE OUIJA-BOARD has attained considerable popularity in recent years due to the "manifestations" of "Patience Worth," and even sane and sober physicians have been caught in the thrall of the "wonders" of this simple piece of wood that has brought us messages from the other world. But this is not at all surprising when we remember that a number of physicians are now taking up occult science and are more or less convinced that "the other world" is greatly interested in their mundane careers. A book that ought to depress the ouija-board enthusiasts and also those who are at present running after "the visitors from the other world" is the hilarious and diverting account of the experiences of two English officers during the Great War, as set forth in "The Road to En-Dor," by Lieut. E. H. Jones (John Lane Company, New York). These two officers, Lieuts. Jones and Hill, were prisoners of the Turkish Government in Yozgad in Asiatic Turkey, and to while away the time they "played" with the ouija board. News soon spread through the prisoners' camp that remarkable manifestations were occurring, and ere long the camp interpreter, known as the "Pimple," got wind of what was going on and became so impressed with what he saw that it was not many hours before he communicated the messages to the commandant, Kiazim Bey. It is easy to understand what followed, for the Oriental mind is much more "believing" than the Occidental, especially where spooks are concerned. Of course, all the "faked" messages were thought genuine by the "Pimple" and the commandant, and both Jones and Hill left no stone unturned in their efforts to gain their freedom by stretching the credulity of the Turks to the utmost. The "stories" of the hidden treasure and the failure of Jones and Hill to achieve their freedom by the finding of it, and their feigned insanity which eventually set them free, are pages of illuminating writing that bear the reader on in

breathless haste and tickle his midriff too often to be mentioned here. Sir Oliver Lodge and Conan Doyle, if they have read this book, have no doubt expressed most contemptuous opinions of it and, even if their opinions were not contemptuous, have looked upon it as a jest. But to the sane man who has thought deeply on the subjects of the ouija board and spiritualism "The Road to En-Dor" is much more than a jest, for under all its humor there is a current of earnestness that will not down and conveys to him how forgetful we are of the trenchant words of Huxley, used as a quotation in this book: "The only good that I can see in the demonstration of the truth of spiritualism is to furnish an additional argument against suicide. Better live a crossing sweeper than die and be made to talk twaddle by a 'medium' hired at a guinea a séance."

P. S.

WE have had our surfeit of heroic stories of the Great War and also of the horrific sort, not to mention the many short stories and sketches which have been written for the purpose of arousing controversy; hence when an author discards writing of this sort and dwells altogether on what is thought at all times but especially in war times as of minor importance in the study of human traits and emotion, readers should give ear to what she has to say. In "Chill Hours," by Helen Mackay (Duffield and Company, New York) we have a collection of short stories and sketches in subdued tones unblemished by the heroic and the horrific. Plain tales for plain people are these, but their very plainness makes them appealing. No doubt, during the Great War, there were many undertones which escaped even the acute eye of him who thought he was especially gifted to envisage the whole picture, and no doubt many of these undertones were lost. This was natural, for most of the writers who reported the doings of the war in correspondence, in sketches, in long or short stories, were especially moved by the big things—the battles, the many unjustifiable killings, the deeply tragic phases. The author of "Chill Hours" has brushed aside the usual material of war stories and sketches and has taken as her own province that part of the war which had its special pathos—the quieter scenes in the hospital for the most part, and those quiet scenes of domestic life which are completely submerged when cannons belch forth volleys of death-dealing shells. Men and women and children are marshalled before us with faltering steps due to the great disaster that had made France a wasted land, and these faltering steps are in their homes and in their streets and in their hospitals.

That the author knew France during her years of extreme resignation is illustrated on every page of this book, but what she knew better than anything else was the pathos, never of the despairing sort but continually buoyed up by unquenchable optimism, which permeated all walks of life in France. Peasants and the children of the poor are not forgotten, and on account of the author's regard for them and also on account of her understanding of their small joys and their craving and gratitude for sympathy, she reaches deep into the innermost thoughts of the French people. Dorothy Canfield's "The Home Fires of France" brought us cheek-by-jowl with the French nation during the war, but her book, good though it was and filled with the understandingness that made it ring true, nevertheless lacked what "Chill Hours" contains—the grey, subdued tones incident to hospital experiences.

P. S.

We are accustomed to fantastic titles to books and even cities have been credited with "souls" in descriptive works, therefore the title of Gilbert Cannan's book, "The Anatomy of Society" (E. P. Dutton and Company, New York), should not surprise us. To take society and dissect it has been done before by many writers, but to take it and dissect it as if it were the human body is something new in literature. Not that a body is seen on the dissecting table: the author's style is too involved for the reader to see anything so clearly outlined. But it is a dissection, nevertheless; and even more than this, for the author takes us to his special laboratory and studies society histologically. On account of his delvings into the minute anatomy of society the reader at times it completely nonplussed, and by the reader we mean the man or woman who is not an adept in sociological problems. No doubt, like all histologists, Gilbert Cannan sees things which are not apparent to the ordinary anatomist, and because he is gifted in this manner he has a great advantage over the ordinary man. Just what his advantage is it is difficult to say, but the writer of these lines is of the opinion that it is this: Society as constituted today is altogether wrong; wealth and social position are crimes against progress; poverty is a crime against a clean and encouraging social order; too much education will eventually be the bane of our existence. Similar to all histologists, the author gets into snarls that are almost a Gordian knot, and we fear the little Alexanders who read his book will not only be unable to cut the knot, but will say, after they finish the book, that the anatomy and even the histology of the human

body is child's play compared with the anatomy and histology of society as it is today.

P. S.

NEWS NOTES

DR. A. G. MINNICK of Lock Springs, Daviess County, is suffering from a fracture of both arms as the result of a fall on November 29.

DR. AMAND RAVOLD of St. Louis was operated on recently at the Deaconess Hospital. He is making good progress toward complete recovery.

Dr. H. E. Pearse of Kansas City was elected vice president of the Western Surgical Association at the meeting held in Los Angeles December 4.

DR. LOUIS P. BUTLER of St. Louis, who has been ill for several months and recently spent several weeks at Atlantic City while convalescing, has returned home and resumed his practice.

DR. G. W. VINYARD of Jackson, who was operated on at the Frisco Hospital in St. Louis some time ago, is making a very satisfactory recovery.

DR. H. G. WYER of St. Louis, formerly of Kirkwood, has accepted a commission in the Medical Corps of the regular Army with the rank of major, and is now stationed at Ft. Sheridan, Illinois.

THE many friends of Dr. Louis E. Newman of St. Louis, former President of the St. Louis Medical Society, will learn with regret that he suffered a stroke of paralysis some time ago and has been incapacitated for practice.

DR. G. E. SCRUTCHFIELD formerly of Marshall and later superintendent of State Hospital No. 4 at Farmington, has been commissioned major in the Medical Corps of the regular Army. At present he is located at Station Hospital, Camp Grant, Rockford, Ill.

Dr. G. E. Bellows of Kansas City was elected president of the Jackson County Med-

ical Society for the year 1921. Other officers elected are: Vice president, Dr. F. C. Neff; secretary, Dr. Paul V. Woolley, re-elected; treasurer, Dr. W. F. Kuhn, re-elected; members of the council, Drs. F. M. Lowe, F. E. Murphy.

DR. F. C. E. KUHLMANN for five years secretary of the St. Louis Medical Society and major in the Medical Corps of the Army during the world war, has been commissioned in the Medical Corps of the regular Army with the rank of major. His present address is 2106 N Street, N. W., Apartment 22, Washington, D. C.

Two malpractice suits against members of our Association were disposed of during December in both of which the defense committee assisted in defending the suits. One case was dismissed by the court when the plaintiff failed to file bond for costs. The other case was tried before a jury who listened to testimony and arguments for three days and then returned a verdict in favor of the defendant in five minutes.

Dr. Emmett P. North of St. Louis was elected president of the St. Louis Medical Society for the year 1921. Other officers elected are: First vice president, Dr. Malcolm A. Bliss; second vice president, Dr. Charles E. Hyndman; secretary, Dr. John W. Stewart; members of the council, Drs. Cyrus E. Burford, Rudolph S. Vitt, Frank J. V. Krebs, Robert E. Schlueter, Clarence Martin.

THE Medical School of Washington University, St. Louis, is soon to establish short courses for practitioners, varying in duration from six to sixteen weeks. Courses will be offered in medicine, surgery, gynecology, obstetrics, neurology, urology, orthopedic surgery, pediatrics, ophthalmology, laryngology, otology, surgical pathology and roentgenology. These courses, which will begin about April 4, will furnish practitioners in Missouri and neighboring states with the opportunity of renewing contact with a large amount of well correlated clinical material.

A CASE of anthrax in a man living near Chillicothe has been the subject of comment in that section of the state and the warning issued by the U. S. Public Health Service against the use of new shaving brushes without immunization was proved justifiable when it became known that the patient had contracted the disease from a new shaving brush.

Not without interest to us is the observation that the patient is the uncle of one of our members.

From its collection of duplicate volumes of books and periodicals, the St. Louis Medical Library is offering to send copies to hospital libraries. The opportunity has been seized by a number of hospitals in St. Louis who in turn have furnished the medical library with a list of their duplicates from which the St. Louis Medical Library could select acceptable volumes. Any hospital library interested in the offer should address the St. Louis Medical Library, 3525 Pine Street, St. Louis, Mo.

THE incidence of smallpox this winter is causing the usual amount of discussion, dispute and disturbance among the people in various sections of the state when school boards attempt to enforce the compulsory vaccination rule. Reports show an unusually large number of cases, so that health officers and school authorities as well as private practitioners should be on guard against mild and obscure cases mingling with the general public until a negative diagnosis has been established and all unvaccinated persons have been immunized.

The St. Louis University has secured Dr. John Auer, pharmacologist of the Rockefeller Institute, to establish and conduct a department of pharmacology in the medical school. It is the hope of the faculty of the university to be able, through the Centennial Endowment Fund of \$3,000,000 now being raised by the friends and alumni of the institution, to institute complete departments in every line of medical instruction and research and secure as heads of these departments men of professional standing equal to that of Dr. Auer, who has been connected with the Rockefeller Institute since its organization in 1903.

THE American Red Cross needs a number of physicians for service among the children of Eastern Europe. The service is particularly suitable for recent graduates of hospitals who are free to spend a year in the practice of their profession in Europe. The remuneration will be sufficient to represent an adequate salary and living expenses. All transportation will be furnished. A few physicians experienced in pediatrics are also needed by the Red Cross to take charge of groups of workers in public health work. Those who may be interested should write at once, giving age, details of education and medical experience to

Dr. Charles W. Berry, American Red Cross, 44 E. 23rd Street, New York City.

The Medical Association of the Southwest held its fifteenth annual session at Wichita, Kansas, with about 300 members present. A special occasion was the reunion of physicians who had been in service during the late war, fifty of them being present at the gathering. Dr. F. M. Pottenger, of Monrovia, California, and Dr. J. H. Stokes, of the Mayo Clinic, delivered addresses that held special interest for the members, Dr. Pottenger pleading for greater efficiency in the diagnosis of tuberculous conditions and Dr. Stokes urging greater care in the early recognition and treatment of syphilis. Dr. E. H. Skinner, of Kansas City, Mo., was elected president for 1921 and Dr. Fred H. Clark was re-elected secretary and treasurer. The next meeting will be held at Kansas City, Missouri.

THE hospital work carried on by the U. S. Public Health Service in connection with the care of disabled ex-service men and women is rapidly growing and calling for the opening of additional hospitals throughout the country. With this expansion has come a corresponding need for more medical officers and the Public Health Service is desirous of making known the fact that it offers exceptional opportunity for well-qualified physicians in good physical condition who enjoy hospital duty to engage in this class of service. A wealth of clinical material is available. The two hospitals maintained in St. Louis by the Service are caring for an average of seven hundred patients and plans have been completed to open a large dispensary with the most modern equipment in January. Physicians who are interested in the opportunities offered by the Public Health Service should communicate with Surgeon General H. S. Cumming, U. S. Public Health Service, Washington, D. C., or the Medical Officer in Charge, U. S. P. H. S., Hospital No. 35, 5800 Arsenal Street, St. Louis, Mo. Appointment may be had as Acting Assistant Surgeon or commissions in the Reserve Corps of the U. S. P. H. S., in which the pay and allowances, grade for grade, are the same as in the Army. It is probable that legislation will pass very shortly, permitting reserve officers to be transferred to the regular corps.

December 16, this being the first county general hospital erected under the new law. After a dedicatory prayer by Rev. A. A. Wallace, D.D., the president of the Board, Mr. J. W. Dry, presented the building to Audrain County. It was accepted on behalf of the people by Mr. S. P. Cunningham, clerk of the County Court. The rest of the afternoon and evening was given over to a reception, with a large committee of ladies acting as hostesses.

The building was inspected by many citizens on Thursday, Friday, Saturday and Sunday. On Friday, December 17, the physicians of Audrain County and adjoining counties were asked to visit the hospital and were entertained by the physicians of Mexico. At 4:00 p. m. Dr. Frank G. Nifong of Columbia gave an address at the McMillan High School auditorium on "A State General Hospital and Its Affiliation with the County Hospital." He stressed particularly the obligation of the state in the matter of medical and health education, the value of a county hospital as a center for health activities in its own community and the relations and mutual helpfulness of a state hospital and county hospitals.

At 6:30 p. m. supper was served at Hoxsey Hotel. Covers were laid for forty-three, including the hospital board and the superintendent, Miss Sarah H. Reitz. The guests included Drs. Noyes, Nifong, Thornton, McAlester, Sneed and Kampschmidt, of Columbia; Drs. Crews, Christian, Owens, Yates, McCall and McCubbin, of Fulton; Drs. Fleming, Regan and Streater, of Moberly; Dr. Hill, of Auxvasse; Dr. Flynt, of Molino; Dr. Hawkins, of Salisbury; Drs. Rodes, Berry, Jolley, Harrison, Miller, Strode, Coil, Gibbs, Moore, Williams, Blanks, Griffin, Rothwell and Toalson, of Mexico.

Dr. C. H. Neilson of St. Louis in his usual effective way told something of the history of medicine, pointing to some illustrious men in our profession who did their work in small towns, and told of the ideals which should inspire physicians. He emphasized the value of records in hospital work, the necessity of the laboratory, the need of team work, and the educational value of hospitals.

Short talks were made by Dr. Noyes, Superintendent of Parker Memorial Hospital at Columbia, and by the nestor of the Missouri medical profession, Dr. A. W. McAlester of Columbia.

MEMBERSHIP CHANGES, DECEMBER

NEW MEMBERS

THE Audrain Hospital was opened for inspection at Mexico at 2:30 p. m. Thursday,

Busiek, Urban J., 320 Holland Bldg., Springfield.

Brooks, Arthur C., 4661 Maryland Ave., St. Louis.

Butterfield, Edwin R., 1218 Clara Ave., St. Louis.

Cheek, Wm. C., Frisco Hosp., Springfield.

Coffin, Ernest L., 211 Lister Bldg., St. Louis.

Edwards, Edwin D., 4216 Shaw Ave., St. Louis.

Flader, Robt. H., Manchester Bank Bldg., St. Louis.

Guthrie, Henry P., 217½ South St., Springfield.

Hogg, Garrett, 512 Woodruff Bldg., Springfield.

Johnson, Joel E., 628 Main St., Joplin.

Martin, Edward W., 6800 Washington Park Blvd., Kansas City.

Maupin, Howard S., Shelbyville.

Mott, James R., Grovespring.

Peden, Joseph C., 313 Humboldt Bldg., St. Louis.

Sellers, Lyle M., 430 Argyle Bldg., Kansas City.

Walters, Wm. H., 5201 Virginia Ave., St. Louis.

CHANGES OF ADDRESS

Ashley, Hugh V., Bloomfield, to Illmo.

Bates, Gerald C., Appleton City, to Adrian.

Bothman, Louis, St. Louis, to c/o North Chicago Hosp., 2551 N. Clarke St., Chicago, Ill.

Byrns, Robt. E., 3824 North 11th St., St. Louis, to 1105 Salisbury St.

Dawson, Lerton V., Kansas City, to Canadian, Tex.

Evans, Edwin E., Fulton, Mo., to East Louisiana State Hospital for the Insane, Jackson, La.

Fredericks, Edward L., Vanduser, to 445 Bellefontaine Ave., Kansas City.

Hatcher, Ephraim D., Granite City, Ill., to State Hospital No. 3, Nevada, Mo.

Hein, Emil E., 3887 Utah Pl., St. Louis, to Grand and Arsenal St.

Hill, Halbert R., Bachelor, to Auxvasse.

Isley, Chas. F., Excelsior Springs, to 2517 Chestnut St., Kansas City.

Johnston, Elza L., Waverly, to Concordia.

Knott, Minerva M., Jackson, Miss., to Bureau Child Welfare, Jackson, Miss.

Kopf, Albert J., Woodland, Calif., to 622 Southwest Blvd., Kansas City, Mo.

Kuhlmann, Fredk. C. E., 2106 W St. N. W., Apt. 22, Washington, D. C., to 2106 N St. N. W.

Munro, Edw. E. H., City Hospital, St. Louis, to Grand Junction, Colo.

Murphy, Frank E., St. Luke's Hosp., St. Louis, to 3705 Humphrey St.

Poe, Chester A., Bloomfield, to 6131 Easton Ave., St. Louis.

Reichmann, Philip J., Rensselaer, to Oakwood.

Sampson, Chris M., St. Joseph, Mo., to 62 Pendleton Pl., New Brighton, Staten Island, N. Y.

Schmid, Otto A., Bartlett Trust Bldg., St. Joseph, to 2208 Frederick Ave.

Spence, Elbert L., Fulton, Mo., to Louisiana Hospital for Insane, Pineville, La.

Stein, Wm. F., City Hospital, St. Louis, to Cisne, Ill.

Weir, Loren R., Pattonsburg, to 201 E. 23rd St., New York City, N. Y.

Williams, Lee R., 4008 Flad Ave., St. Louis, to Madison Hotel.

Yeagle, Roland P., Pleasant Hill, Mo., to 204½ E. 4th St., Santa Ana, Calif.

DECEASED

Bryan, R. Shepard, 3965 Shaw Ave., St. Louis.

McGhee, J. L., Williamsville.

Ring, Frank R., 609 Chemical Bldg., St. Louis.

CORRESPONDENCE

RECORDING VENEREAL CASES

BUTLER, Mo., Nov. 24, 1920.

To the Editor:

From data gathered from many physicians and from personal experience concerning venereal diseases and their treatment, allow me to say that I fear the present plans pertaining to the handling of such cases are going to meet with sad disappointment. Victims of syphilis and gonorrhea are already shunning the doctor—treating themselves or seeking drug store and lay treatment because of the erroneous impression that they would become subjects of public exposure and state-wide condemnation if they go to a physician for treatment.

Since the inauguration of the recording method there has been a great dropping off of venereal cases in the practice of country doctors and yet there are the usual number of cases prevalent, if public comment counts for anything. Such vigilance will cause many victims to conceal their malady more closely in the endeavor to treat themselves by drug store remedies for fear that their names may go on record as victims of a loathsome disease derogative to their community and social standing. I have just returned from attending the Southern Medical Association at Louisville, and in hearing papers read and discussed on this subject, and in talking with several physicians in regard to the case record of venereal diseases, many were of the opinion that such a plan was menacing the purpose of the present law by driving the victims under cover.

With the improved methods of treatment, and the attending physician impressing upon the patient the vital necessity of placing himself in the hands of a reputable physician at once and staying with him

so long as clinically advisable, making the necessary blood and microscopical tests from time to time, which can all be done in profound secrecy, is, I believe, the best method to pursue. In connection with the private handling of such cases, let each patient be furnished with a printed booklet censored by the state board of health, explaining in plain detail the magnitude of the dangers of syphilis and gonorrhea in all their various phases. These booklets should be scattered over the land that everybody might read them and know the havoc the Red Plague plays with the present and coming generations.

I believe the best way to check this awful onslaught of syphilis is to educate the public concerning its nature and the incurable sequelae that are passed down through generations unborn. Let the victims know that they are a menace to society and to the health and well-being of others, just as the tuberculous subject is aware of his liability in transmitting tuberculosis. Let them know that the insane institutions are filling up with improperly handled cases of venereal disease, remove from their minds the belief that they are merely temporarily handicapped from indulging in the social functions of life, ready in a short season to resume their place in society. They must be taught emphatically that the social restraint necessary to safeguard unsuspecting friends, relatives and the public, must extend beyond any question of doubt as to the least possibility of a focus of infection remaining about their persons. This can only be determined by repeated examinations by a competent physician. If syphilis in its rapid progression be not arrested in some efficient manner different from all other previous and present plans, it will be the ultimate downfall of the human race. The percentage of syphilis either acquired or inherited throughout all civilized nations is indeed appalling! We are fast becoming a people of mental degeneracy. Paresis, paralysis and epilepsy as well as all other neurotic tendencies, are rapidly growing in frequency and severity.

Cannot the medical profession formulate some more effective plan by which we may combat the ravages of this Red Plague that is stalking unthethered throughout the land?

Let us hear from others on the subject.

T. F. LOCKWOOD, M.D.

MISCELLANY

THE KANSAS CITY GENERAL HOSPITAL CLINICS

To the medical man acquainted with the hospitals of the East and other older cities, as well as with the best managed hospitals of Kansas City, and who has served as a member of the Staff of our General Hospital in recent years, the demonstration of Tuesday evening was a great satisfaction and pleasure. At this, the first open "clinic" of the hospital, there were present some 150 members of the local profession with several visiting guests brought together by the announcement that a "clinic" was to be given demonstrating the character of cases coming to the institution and the methods of service and treatment offered them.

First to impress one in visiting our hospital now is a very great and favorable change in the order, cleanliness, system and fine spirit which has been established under the management and direction of Dr. Gist and the new board of health. The interior of the monument of brick on the hill today presents the appearance of a hospital, with its newly painted

walls, its clean floors, absence of odors, and the evident purpose of the various departments, such as the record room, pathological and X-ray laboratories and the segregated wards. To this has been added a wholesome spirit and evident discipline among the hard working and interested interns and nurses, and a system of records is now being kept, thanks to the staff, which is of real value. Whether the visitor be doctor or layman, such improvement is impressive.

The general medical profession and the County Society desire to express their commendation to our Honorable Mayor for his wise appointments of the present superintendent and the active board of health, who are so ably and unselfishly supporting Dr. Gist.

The "clinic" initiated will prove one of the greatest boons to Kansas City at the present time, with its absence of medical schools, in serving as a post-graduate course to the large number of eligible physicians whose availability of material is of a necessity limited, and who in thus coming together have an opportunity to compare experiences and to discuss diagnosis and treatment.

As a comment it is suggested to the clinic committee that the cases presented in the future be restricted in number and each case very thoroughly worked up, and time offered for both examination and discussion of diagnosis and treatment by the visiting physicians. By grouping the medical and surgical cases systematically and offering perhaps not more than six or eight for the evening the benefit derived will be greatly enhanced. However, the great interest manifested at this particular clinic in the large attendance and the great number of valuable cases offered indicate the need and the possibilities in this opportunity offered by our public general hospital. It is hoped Dr. Gist may be able to offer clinics at regular intervals and that such may become an established institution, thus serving the general profession and the public in a way not possible before.—*Bull. Jackson County Med. Society.*

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.

SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The meeting of the Southeast Missouri Medical Association held at Jackson, October 19-21, 1920, was well attended and besides the usual papers on scientific subjects there was a memorial session held in honor of Dr. Lemuel T. Hall of Potosi, recently deceased. There were almost fifty members and visitors in attendance during the meeting which was presided over by Dr. W. G. Patton of Cape Girardeau, the president of the Association. The following papers were read:

Annual Address of the President—W. G. Patton, M.D., Cape Girardeau.
The Accident Company the Doctor's Jinx—W. F. Grinstead, M.D., Cairo, Ill.
Arteriosclerosis—T. F. Frazer, M.D., Farmington.
Successes and Failures with Biologics—W. K. Statler, M.D., Oak Ridge.
Scarlet Fever—E. J. Nienstedt, M.D., Blodgett.
Simplifying Our Tonsil Operations and Reducing

Danger to a Minimum—W. D. Black, M.D., St. Louis.

Focal Infections of Sinuses and Teeth—H. L. Cunningham, M.D., Cape Girardeau.

Cases were reported by Drs. A. H. Hamel, W. E. Yount, and G. B. Schulz.

A letter of condolence was directed sent to Dr. G. W. Vinyard of Jackson, who was ill in a hospital at St. Louis.

At the memorial service the committee appointed to draft resolutions on the death of Dr. Hall submitted the following, which were adopted:

WHEREAS, Death has severed from the roll of our membership the name of Dr. L. T. Hall, therefore be it

Resolved, That in his death we realize that one of our most faithful and valued members has left us; and be it further

Resolved, That as an expression of our great sorrow at his death and highest appreciation of his professional attainments and splendid Christian character, we set aside and occupy this hour as a memorial service in his honor; and be it further

Resolved, That the secretary be and is hereby requested to send a copy of these resolutions to the family of the deceased.

W. R. GOODYKOONTZ,
J. P. SEBASTIAN,
GLENN SEIBERT,
Committee.

After the resolutions had been adopted personal recollections and expressions of esteem of Dr. Hall were voiced by the following members:

Dr. J. P. Sebastian: I feel my inability to adequately portray to you the virtues of our departed friend, Dr. L. T. Hall. I first met Dr. Hall at Fredericktown back in the eighties at a meeting of this society and I think our acquaintance was brought about by the very intimate and friendly associations of his brother who is now present and an honored brother in our society. At my first meeting with Dr. Hall I was deeply impressed with his dignified and gentlemanly demeanor, and as our acquaintance ripened I learned to love him for his qualities of head and heart. Dr. Hall led a democratic life and was trusted and loved by all and as he told me much of his work was among the poor. I valued the Doctor for his social qualities and found him a great and very interesting conversationalist; using the plainest and simplest words to convey his thoughts, making himself easily and readily understood. Dr. Hall never sought preferment, but the places he occupied in life sought him. Mr. President, I believe in seeking perfection and if it was ever attained by any of the great and good men of our society Dr. Hall should be classed with them. Dr. Hall was a devotee of the Master and his piety was plainly set forth in his life and none was more impressed with this fact than his brethren of this society at their semi-annual meetings. No doubt he has invoked the blessings of heaven on this body more often than any member of it, unless it be our venerable and much loved Henderson. I loved to hear Dr. Hall pray. He used the same plain and simple language he would in making a request of a dear and human friend in whom he had explicit confidence.

Now, Mr. President, let me close these very inadequate and imperfect remarks, by expressing my appreciation of the life and character of my dear friend in one word, which means so much and which if used and practiced in our everyday life, the world would be better and happier—Dr. Hall lived the altruistic life.

Dr. W. F. Grinstead called for a show of hands

of those who were personally acquainted with Dr. Hall. Thirteen hands went up. Dr. Grinstead said that he had joined this association forty years ago and found Dr. Hall extending a welcoming hand. He said that Dr. Hall was one of its staunchest members, was sought out when able counsel was needed, was a pillar of the Southeast Missouri Medical Association, and pointed the way to younger men.

Dr. A. H. Hamel: Gentlemen, this is indeed a solemn hour. Dr. Hall was ethical, clean and honest. He was also an authority on medical subjects. A great man has fallen. He had sorrows and bore them well. He revised the by-laws of the Southeast Missouri Medical Association in 1903. His presence in the association always carried a halo of dignity with it. He helped his fellow practitioners to be better men and better doctors. He helped to convert rough ashlers into perfect ashlers. He helped to smooth out the paths and make life easier and more enjoyable for others.

Dr. W. R. Goodykoontz eulogized his departed companion with earnestness that led all to realize that indeed a prince had fallen and that society had lost one of its most useful and highly respected citizens.

E. J. NIENSTEDT, M.D., Recording Secretary.

CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society met in Fulton, Dec. 21, 1920, at the Palace Hotel at 6:30 p. m. There were present thirteen members, and Dr. Elsworth S. Smith, Jr., of St. Louis and Dr. J. G. Moore of Mexico, visitors.

After supper the society convened and Dr. Elsworth Smith read an interesting and scientific paper on "Cardiolysis for Chronic Mediastinal Pericarditis." This paper was much enjoyed by all and discussed by several of the members.

Dr. McCall of Fulton read a timely and practical paper on "Ectopic Gestation," which was freely discussed.

A vote of thanks was tendered Dr. Smith for his presence and participation in the meeting.

Officers for 1921 were elected as follows: J. B. McCubbin, President; A. D. Ferguson, Vice-President; M. Yates, Secretary-Treasurer; Delegate and Alternate to State Association, M. O. Biggs and G. D. McCall.

MARTIN YATES, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, Thursday, December 9, 1920, in the rest room of the Court House. The meeting was called to order by Dr. J. S. Triplett, vice president, and the following members were present: Drs. W. F. Chaffin, H. S. Crawford, A. R. Elder, H. Jerard, M. P. Overholser and J. S. Triplett. Miss Anna K. Westman, public health nurse was also present as a guest of the society.

The following officers were elected for the year 1920: President, W. F. Chaffin, Raymore; first vice president, R. D. Ramey, Garden City; second vice president, M. P. Overholser, Harrisonville; secretary-treasurer, H. S. Crawford, Harrisonville; member of board of censors for three years, H. Jerard, Pleasant Hill; delegate to State Association for one year, A. R. Elder, Harrisonville.

The program consisted of a very interesting paper by Dr. H. Jerard on "Non-Medical Therapy." The

paper was discussed by all the members and a very interesting and profitable hour was spent.

Miss Anna K. Westman spoke briefly on her work and reported the progress she was making in school inspections.

It is regrettable that so few were able to be present, and also that all the members who were on the program were not there, as it detracts from the interest in the society. We hope to see more interest and better attendance during the coming year.

H. S. CRAWFORD, M.D.,
Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society held its meeting on Tuesday evening, November 23, in the Chamber of Commerce rooms, at Moberly. In the absence of Dr. Nichols, the president, the meeting was called to order and presided over by Dr. Barnhart of Huntsville.

The main purpose of the meeting was the annual election of officers, and the following were chosen to serve during 1921: R. A. Wood, Clark, president; F. L. McCormick, Moberly, vice president; C. H. Dixon, Moberly, secretary-treasurer; Godfrey O. Cuppidge, Moberly, delegate; George M. Nichols, Higbee, alternate.

The society enters into the new year with expectations of making this one of the best years since its organization. Meetings will be held the second Tuesday in each month, the next meeting to take place December 14, when Dr. L. O. Nickell of Moberly will read a paper.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its annual meeting at the home of Dr. Wm. J. Rabenau, Fordland, on December 15, 1920. The meeting was called to order by Dr. M. Highfill who was chosen as president pro tem. The following responded to the roll call: Atkins, Bailey, Bruce, Highfill, Sayers and Rabenau. The minutes of the last meeting and the report of the treasurer were read and approved.

Drs. John L. Jolly and J. E. Welsh of Marshfield were present as visitors. Their applications for membership were received and acted upon favorably by the board of censors and they were elected to membership.

This being the annual meeting the election of officers took place with the following result: Dr. E. M. Bailey, president; Dr. W. A. Atkins, vice president; Dr. John R. Bruce, secretary-treasurer; Dr. W. J. Rabenau, delegate; Dr. M. Highfill, alternate.

Clinical cases were then reported and discussed after which we took dinner at the Fordland Hotel. There being no further business, the meeting adjourned till March.

Our next meeting will be held at Marshfield, in March, 1921.

JOHN R. BRUCE, M.D.,
Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in the office of Dr. J. A. Fuson at Mansfield, Thurs-

day, November 4, at 3 p. m., with the following members present: J. A. Fuson and R. M. Rogers of Mansfield; R. M. Norman and J. L. Gentry of Ava; R. A. Ryan and L. T. VanNoy of Norwood; and A. C. Ames of Mountain Grove.

After an informal discussion of fees, in which the general sentiment was that they should be maintained in accord with the general trend of prices of other things, the meeting was opened by the president, J. A. Fuson. It being the time for the annual election of officers, it was moved and carried to suspend the rules and elect by acclamation, with the result that all the old officers were re-elected as follows: J. A. Fuson, president; R. M. Norman, vice president; A. C. Ames, secretary and treasurer; and L. T. VanNoy, censor for three years. The censors holding over are H. U. Daugherty for one year and B. E. Latimer for two years.

After the election all present paid dues for 1921, and next day several others did likewise. J. R. Mott of Grove Springs was elected to membership.

Dr. Rogers read a paper on "Fractures, With Special Reference to Colle's Fracture," which was discussed by all present. The other members on the program being absent, their papers were left over for the next meeting.

A. C. AMES, M.D., *Secretary.*

BOOK REVIEWS

EPIDEMIC ENCEPHALITIS. By Frederick Tilney, M.D., Ph.D., Professor of Neurology, Columbia University, etc., and Hubert S. Howe, A.M., M.D., Instructor in Neurology, Columbia University, etc. New York: Paul B. Hoeber, 1920. Price, \$3.50.

This brochure may be said to be very timely. So much concerning this epidemic disease has been reported from all sections of this country as well as from abroad that many readers will be interested in a reliable résumé of the extensive data that have been accumulating during the past several years. The high standing of the authors of this little volume is a guarantee that this résumé has been done in a thorough and practical manner, and the reviewer is impressed with the excellent use they have made of the abundant material studied personally by them, and also that they are thoroughly familiar with the data from various other sources in checking up their work. In short, it is a pleasure to feel that we can commend the work unreservedly. We would, if possible, lend emphasis to the authors' insistence on water in treatment, almost to the exclusion of medicinal measures. Until the patient is safely convalescent beyond question he should be stimulated to drink water freely. Even when the patient is extremely lethargic, pains should be taken to give water by mouth frequently, along with fluid nourishment; and in addition, as the authors suggest, the Murphy drip, colonic irrigations, etc. F. R. F.

THE OXFORD MEDICINE. By Various Authors. Edited by Henry A. Christian, A.M., M.D.; Hersey Professor of the Theory and Practice of Physic, Harvard University; Physician-in-Chief to the Peter Bent Brigham Hospital, Boston, Mass., and Sir James Mackenzie, M.D., F.R.C.P., LL.D., F.R.S., etc. In six volumes. Illustrated. Volume II. Diseases of Bronchi, Lungs, Mediastinum, Heart, Arteries and Blood. Oxford University Press, American Branch, 35 West 32nd Street, New York.

The second volume of the Oxford Medicine is, as might have been expected, of a very high order of

excellence. The articles, twenty in number, represent the best thought and research of our time in their special subjects. Dr. Hoover opens the volume with two chapters, one on diseases of the bronchi and one on respiratory excursion of the thorax. His well-known contributions on the latter subject in the current literature of the last five years make it an especially authoritative statement. The same may be said of Dr. I. Chandler Walker's chapters on asthma and hay fever. A particularly interesting chapter is that by Sir John Rose Bradford on massive collapse of the lung, a subject which received considerable attention during the war. Dr. Hamman's chapter on the lungs, Dr. Capp's on the pleura, and Dr. McLester's on the mediastinum are all satisfactory. We could wish Dr. Capps had reviewed Dr. Engelbach's old work on pleural effusion and Dr. Ashurst's work on interlobar empyema, but this criticism detracts only a little from an otherwise excellent article.

Dr. Mackenzie treats of chronic heart disease in his characteristic manner. Those familiar with his writings will find little that is new here. Dr. Allbutt has a delightful paper on the pericardium—urbane, distinguished, final. Hay on irregularities, Ivy Mackenzie on the heart in infectious diseases, Thompson on congenital heart disease, and Girdwood and Mackenzie on arteries and aneurysm, complete the cardiovascular section.

The section on blood diseases is, we believe, the best in the volume. Dr. Cecil K. Drinker writes an introductory essay on the pathological physiology of blood cell formation and destruction. Dr. George R. Minot comes next with a splendid article on the anemias and Dr. Reginald Fitz contributes the chapter on polycythemia. It is pleasant to see two such Boston names in a later generation in medicine. Drs. Ordway and Gorham on the leukemias, Christian on purpura, and McLean on hemophilia complete the volume. L. C.

VENEREAL DISEASES. Their Clinical Aspect and Treatment. By J. E. R. McDonagh, F.R.C.S., Surgeon to the London Lock Hospital; Late Hunterian Professor, Royal College of Surgeons, etc., London. Four hundred fifty pages, with 106 full color plates, and 21 half-tone pictures. Price, silk cloth binding, \$20.00. C. V. Mosby Company, Publishers, St. Louis, Mo.

With its atlas of more than one hundred colored plates and a score of half-tone illustrations, this book represents the views of one of Great Britain's foremost medical men. McDonagh is a skilled biologist and chemist as well as a surgeon, and his opinion on any scientific subject is always worthy of attention even though one cannot always agree with him. In the present volume, the clinical aspect of venereal diseases is presented in a clear and concise manner, and the splendid illustrations greatly increase the educational value of the text, especially in those sections devoted to syphilis and to chancroid. The numerous and typical case histories also should prove very helpful to the student.

Treatment is given much attention. Some of the drugs, as intramine (an Amino-compound of sulphur), the arsalytes, and the new sulphonylate compounds, will be an innovation to American syphilographers, but the older drugs and methods are also fully and authoritatively discussed.

Not the least valuable chapters in the book are those devoted to sexual neurasthenia and to venereal disease and its relation to the public health.

The book is an instructive one, provocative of thought, and well worth the perusal and study of every practitioner of medicine. R. L. S.

THE NOSE, PARANASAL SINUSES, NASOLACRIMAL PASSAGEWAYS, AND OLFACTORY ORGAN IN MAN. A Genetic, Developmental and Anatomico-Physiological Consideration. By J. Parsons Schaeffer, A.M., M.D., Ph.D., Professor of Anatomy and Director of the Daniel Baugh Institute of Anatomy of the Jefferson Medical College of Philadelphia. With 204 illustrations of which 18 are printed in color. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. Price, \$10.00 net.

In attempting to review this monograph on the development of the nose and accessory sinuses, the reviewer has the sensation as of a man carrying a faded wild flower into a conservatory. The book is rich in material for one who wishes to know the nose, because it covers in splendid fashion the development (Genetic) of the nose. Probably due to lack of material, this field has been sparsely covered both in this country and in Europe, although the literature of the adult nose and sinuses is more than redundant.

The care in the preparation of the work is well shown in the excellent illustrations; and the conclusions, although leaving some gaps, are conservative and justifiable.

Particularly timely is the stress upon morphological variations, in these piping times of focal infections and random surgery in the nose. V. W. M.

DIABETES A Handbook for Physicians and Their Patients. By Philip Horowitz, M.D. With twenty-seven text illustrations and two colored plates. New York: Paul B. Hoeber. Price, \$2.00.

This little book is apparently designed to be put in the hands of diabetic patients. As such it will inevitably invite comparison with Joslin's "Diabetic Manual,"—a comparison that the present book does not stand very well.

Dr. Horowitz, for instance, makes no mention of what has come to be called the Allen treatment nor of starvation days. This is a defect, irrespective of what one may think of the Allen treatment, in a book to be put in a patient's hands, because at the present time there is so much said of this treatment that a diabetic will sooner or later be certain to hear of it and will want to know something about it. Furthermore, the theory which Dr. Horowitz elaborates as a cause of diabetes is most unorthodox and, in the opinion of the reviewer, a dangerous one to give to patients. The author takes full credit for it and refers to original articles of his own in medical journals—a practice which savors of genteel advertising. In brief the theory is, that in diabetics there is a disturbance of ductless glands (a theory which should be credited to Van Noorden) due to irritation from autointoxication from the bowel. The reviewer does not know what pathologic condition "irritation" of an organ is. The only exact conception he can form of it is that tissues one of whose functions is irritability, such as muscle, is subjected to a large number of stimuli so that it is in a state of irritation. But Dr. Horowitz apparently has some tissue change in mind. Be that as it may, the dangerous part of it is, that advice is given to take bacillus bulgaricus tablets in order to stop the autointoxication and save the tissues from irritation. Now, in our opinion, it is dangerous to allow any diabetic to form the idea that any drug by mouth can in any way replace dietary restrictions in the treatment of the disease.

In advising patients to make tests for blood sugar the author does another unwise thing, his assertion that it is as important to examine the blood as the urine being a gross overstatement. The technique of blood sugar analysis is too difficult to trust to a patient, and even for the physician the test for sugar

in the urine is the most delicate and efficient of all tests. The illustration to show the reaction for acetone does not resemble the color of acetone, nor does the illustration of the reaction for diacetic acid look like diacetic acid.

In some respects the book is better than these criticisms would seem to indicate. The various diet lists for mild diabetics are very good. Many other parts are worth while. But the objections mentioned seem so important that a later edition should correct them. L. C.

PHYSIOLOGIE NORMALE ET PATHOLOGIQUE DES REINS.
Par L. Ambard Ancien Chef du Laboratoire de Chimie, de la Clinique des Maladies des voies urinaires à l'Hôpital Necker. Professeur à la Faculté de Strasbourg. Deuxième Edition Entièrement Remaniée. Masson et Cie, Editeurs. Libraires de L'Académie de Médecine. 120. Boulevard Saint-Germain, Paris, VI. 1920.

The insistent demands made by genito-urinary surgeons upon physiologic chemists for better methods of estimating the vital capacity of enfeebled operative patients has resulted recently in a remarkable improvement in the methods of urinary analysis and astonishing advances in blood chemistry. The present volume emphasizes this point. The author is chief chemist of the laboratory of Necker Hospital in Paris, a hospital devoted to the treatment of genito-urinary diseases which has given us the ingenious Guyon, the lamented Albarran and the present able chief, Professor Legueu.

Ambard has been at work for a number of years investigating elimination, and especially upon the relation between the concentration of urea in the blood and the rate of excretion of urea in the urine. In 1909 he announced the belief that the excretion of urea in the normal individual is carried out according to definite laws capable of numerical expression and formulated these laws. They are, first: when the concentration of the urea in the urine is constant the quantity of urea excreted in the urine varies proportionately to the square of the concentration of the urea in the blood. Second: when the concentration of urea in the blood remains constant, the quantity excreted in the urine varies inversely as the square root of the concentration in the urine.

Out of these two has come a third law from which the constant (coefficient)—*la constante uréo-sécrétoire*—is obtained, viz.: if the concentration of urea in the blood and urine vary simultaneously, then the rate of output varies directly as the square of the concentration of urea in the blood and inversely as the square root of that in the urine. An accurate working formula is obtained by adding correction factors for the patient's weight and 25 gm. of urea per litre for standard urinary secretion.

These studies were published in a volume issued in May, 1914. French laboratorians and clinicians took it up with enthusiasm and found it of very great value in the diagnosis and prognosis of the varied conditions associated with deficient renal elimination. Scant attention was given it in other foreign countries, very probably on account of the war, but in America scientists and clinicians gave it serious consideration. Much has been written about it, one faction highly lauding, another severely criticising it. One professor of chemistry dismisses it with this pontifical pomposity: "The complicated mathematical formulas introduced in connection with Ambard's coefficient do not tend to increase one's confidence in that coefficient. It is difficult to see how square roots and cube roots can help to elucidate such a simple metabolism proposition." On the other hand, an equally skilled chemist says: "That such a number of possible factors influencing a physiological

process such as the rate of excretion of urea or sodium chloride can be controlled and brought into numerical laws which show a high degree of constancy, is of great importance from the standpoint of normal and pathologic physiology. It suggests that many of the so-called vital processes may work under laws as definite as the better known laws of physics. The rate of flow of liquids under different conditions has long been subject to numerical expression by the laws of hydrostatics. That at least certain functions of the body tissues can be as well defined now appears probable." It is further claimed that the formula is untrustworthy because Ambard used an inaccurate method of determining urea, but McLean says, "Ambard's coefficient when computed from results obtained by the accurate methods of Folin and his collaborators, varies in normal individuals only between narrow limits and may be regarded as constant."

The present volume is the second edition enlarged and rewritten. There is a preface by Professor Legueu followed by an introduction by the author, and the work is then divided into two parts: The physiology of the normal kidney, and the physiology of the diseased kidney. Under the first part are chapters on Types of Renal Elimination, Maximal Concentration of the Elements of the Urine, Excretion of Substances Without Threshold, The Thresholds in General, Time of Elimination, Histologic Physiology. Part second deals with the three types of nephritis and their manifestations, the classification of Widal being used: General manifestations of nephritis, History of Nephritis, Prognosis in Nephritis, Renal Function and Surgery, Examination of the Output from each Kidney, etc.

The book is written with the simplicity, directness and clearness that characterizes French scientists. The print is large and clear, very few typographical errors marring the pages; the illustrations are good, well chosen and illuminate the text. No laboratorian, clinician or surgeon can afford to be ignorant of this work. It is well worthy of translation. A. R.

PATHOGENIC MICROORGANISMS. A Practical Manual for Students, Physicians and Health Officers. By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College and Director of the Bureau of Laboratories of the Department of Health, New York City, and Anna Wessels Williams, M.D., Assistant Director of the Bureau of Laboratories of the Department of Health, etc., assisted by Charles Krumwiede, Jr., M.D., Assistant Director of the Bureau of Laboratories, etc. Seventh Edition, Enlarged and Thoroughly Revised. With 214 Engravings and 9 Full-Page Plates. Lea & Febiger: Philadelphia and New York. 1920. Price, \$6.00.

The authors and publishers of this book have placed in the hands of physician, student or laboratory worker, a book covering every phase of the subject in so simple and complete style that it cannot fail to be understood.

The first chapters are devoted to a general discussion of bacteriology embodying morphology and cultural peculiarities, special attention being paid to the preparation of culture media, sterilization, stains, etc.

Three chapters are devoted to thorough discussion of anti-microbial or anti-protein substances, an interesting chapter appears on hypersensitiveness, dealing with enzymes and anti-enzymes, and an excellent chapter deals with complement fixation tests and their antigens.

The preparation of the elements or reagents enter-

ing into the complement fixation test for syphilis is presented with extreme care. In no more than a dozen pages the author has told all that need be told about the theory, technique and practical application of the test, wisely omitting the less important ramifications.

The chapter devoted to the discussion of the diplococcus of pneumonia is up to the minute in everything of importance known of this organism.

In a study of diphtheria and its causative organism there is much to be said not only of scientific interest but of immense practical value, and the authors have written an excellent article dealing with the disease and its organism from practically every angle. The Schick test is also discussed, the technique given in detail and a table printed showing the relative frequency of positive reactions in ages ranging from one to thirty years.

During the recent pandemic of influenza the authors struggled unceasingly in an effort to prove the pathogenic organism responsible for the disease and to grow and identify it by culture methods and antibody serum reactions. Their chapter on the subject is quite complete. E. L. S.

AN EPITOME OF HYDROTHERAPY. For Physicians, Architects and Nurses. By Simon Baruch, M.D., LL.D., Consulting Physician to Knickerbocker and Montefiore Hospitals, Consulting Hydrotherapeutist to Bellevue Hospital, New York City, Formerly Professor of Hydrotherapy, College of Physicians and Surgeons, Columbia University. 12 mo of 205 pages, illustrated. Philadelphia and London: 1920. W. B. Saunders Company. Cloth, \$2.00 net.

This book has many virtues and some faults. Like nearly all writers on physical therapeutics the author spends a good deal of time bemoaning the fact that his branch of therapy is not more generally used. He blames in general the torpidity of the medical profession and the instructions of hydrotherapy as given in some textbooks on medicine. As a matter of fact, the reason is very well illustrated in this very book, which is written in poor, involved and confused English. His favorite method of using the infinitive is the split method; it is, to be exact, his only method. There is a long tirade about how not to give the bath in typhoid fever and then no clear description of how to give it.

The reviewer has been teaching therapeutics to medical students and nurses for several years. He has always dwelt on the value of physical therapy—water, heat, massage, light and electricity. But he has always experienced difficulty in referring his classes to any literature on the subject that was worthy of consideration. In general the faults of the literature are, that it is poorly written, that it makes claims which are grossly exaggerated, that it describes methods of treatment which require too much and too expensive apparatus, and that the methods are useful largely in trivial affections only.

Hydrotherapy—the use of water in treatment—is a method which should be applicable in any house where hot and cold water is obtainable. A textbook which has for its object the description of a set of methods of hydrotherapy of this kind—the kind which is so simple that they can be improvised in any bathroom—would be doing a good work, for hydrotherapy is certainly the most valuable of the physical therapy methods. The present volume has nearly fifty of its two hundred pages of text devoted to a description of the way to install hydriatic institutes.

But the book's virtues are quite real. Its claims for the value of hydrotherapy are within limits of fact. The description of the method of installing the hydriatic institute above referred to is a very val-

uable contribution to the subject and has a mass of practical and experienced advice. The description of the use of water in sunstroke is splendid. The chapters on the physiology of the body under the use of water in various ways is very valuable. And on account of its small size and the authority of the author it should be the book to put in the hands of nurses and students. L. C.

MATERNITAS. A Book Concerning the Care of the Prospective Mother and Her Child. By Charles E. Paddock, M.D., Professor of Obstetrics, Chicago Postgraduate Medical School; Assistant Clinical Professor of Obstetrics, Rush Medical College, etc. Chicago: Cloyd J. Head & Co.

This is a very engaging little book for several reasons. In the first place its practicality is beyond dispute and in the second place the literary style is easy, pleasant and readable; and, moreover, there are no incrustations of technical terms to prevent the quick understandingness of the author's meaning. Although written "down" to the mentality of the "prospective mother" and although meant especially for the non-medical reader, there are numbers of points in the book which should interest all those practitioners who engage in obstetric work. The accoucheur who specializes in confinement cases may say he has known Dr. Paddock's teachings for a number of years, but, even granting this, has he acquired them without labor, without a diligent search for them through the voluminous textbooks? And, even after a most diligent search, has he found the presentation of the facts characterized by clarity, succinctness, and a thorough sanity as regards the point of view? We doubt it, hence our recommendation of this book even to him who may at the start say: "I have known all these things for years." But as concerns the practitioner who does general work and who is not a dyed-in-the-wool specialist, and also as concerns the "prospective mother," there can be no doubt of the book's value, since in the former case the general practitioner will profit to a considerable degree by learning in a compact form just those points which count for much in the sick-room and whose neglect often invites drastic criticism from patient and nurse, and in the latter case the "prospective mother" will be greatly benefited. For there will be brought to her notice the easiest and most practical way out of her difficulties at a critical time of her life when, one might say, the most asinine advice is given her by kind but decidedly interfering relatives and friends. A good book is Dr. Paddock's "Maternitas," and when we say that a book is good the highest praise is meant, for by "good" is meant much more than would be meant by fulsome praise.

P. S.

HYGIENE: DENTAL AND GENERAL. By Clair Elsmere Turner. Assistant Professor of Biology and Public Health in the Massachusetts Institute of Technology; Assistant Professor of Hygiene in the Tufts College Medical and Dental Schools. With Chapters on Dental Hygiene and Oral Prophylaxis. By William Rice. Dean, Tufts College Dental School. St. Louis: C. V. Mosby Company. 1920. Price, \$4.00.

This book presents the essentials of the subject in simple form, oral hygiene and prophylaxis being treated in a very satisfactory manner. Communicable diseases and health administration likewise are clearly discussed. As a whole the book should prove satisfactory to that large body of practitioners who are not specialists on hygiene but who, in the pursuance of general practice, must know something of the subject. A. E. H.

STUDIES IN NEUROLOGY. By Henry Head, M.D., F.R.S. In conjunction with W. H. R. Rivers, M.D., F.R.S., Gordon Holmes, M.D., C.M.G., James Sherren, F.R. C.S., Theodore Thompson, M.D., George Riddoch, M.D. Volumes 1 and 2. London: Henry Frowde, Oxford University Press, Hodder & Stoughton, Ltd., Warwick Square, E.C. 4. 1920. Price, \$17.00

The two volumes consist mainly of a republication of seven papers which appeared in *Brain*, 1905-1918. The first volume deals with methods of examination, the peripheral nervous system and a human experiment in nerve division. The second volume is composed of papers dealing with "the grouping of afferent impulses within the spinal cord, the automatic bladder, excessive sweating and other conditions in gross injuries of the spinal cord, sensory disturbances from cerebral lesions, and sensation and the cerebral cortex."

The work is the result of observations carried on for a number of years. The entire subject is considered from the standpoint of function evolution. The experiment in section of the human nerve is especially instructive, the results of such studies giving us a newer conception of functional neurology. The work is essentially clinical but the care with which the observations were made places these papers in the field of pure science.

These two volumes should make friends with all those interested in a better understanding of the nervous system. The work is to be recommended not alone to the neurologist but to the physiologist and the clinician.

H. W.

A TEXT-BOOK OF PHYSIOLOGY. For Students and Practitioners of Medicine. By Russell Burton Opitz, M.D., Ph.D., Associate Professor of Physiology, Columbia University, New York City. Octavo volume of 1185 pages with 538 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$7.50 net.

The author, alive to modern tendencies and realizing the importance of time and the practical in medicine, has put forth a book on physiology which should appeal strongly to students and practitioners of medicine. The subject of physiological chemistry is concisely handled. As a whole the work deals primarily with the mechanical or physical side of physiology. The illustrations are numerous and well chosen and the subject matter fairly well brought down to date. Many references to original sources are given. The text is very readable, the presentations are clear and the subject matter well arranged. The medical student will find this book a handy tool and the practitioner who is attempting to explain diseased conditions on other than anatomical and bacteriological grounds will find here a wealth of information and a source of inspiration.

H. W.

INFECTIOUS DISEASES. A Practical Textbook. By Claude Buchanan Ker, M.D. Ed., F.R.C.P. Ed., Medical Superintendent, City Hospital, Edinburgh, etc. Second edition. London: Henry Frowde, Oxford University Press, Hodder & Stoughton, Warwick Square, E. C., 1920. Price, \$17.00.

This work will be of great value to one interested in the ordinary infectious diseases because of its practicality and its exhaustive account of the subject. With the results of Dr. Ker's personal experience he includes those of others.

In the etiology of each disease the transmission of its infection is written in line with the most modern ideas of such transmission, supplanting the older air borne theories. The method and time of isolation hinge on these factors.

Of symptoms there is a well ordered account. Complications are well taken care of, the account of paralysis in diphtheria being noteworthy.

Many excellent hints on diagnosis are observed; for example, the use of the diazo reaction to differentiate measles from rubella; the value of circumoral pallor in scarlet fever; the special examination of the dorsum of foot in cases seen late, as this is the locality in which rashes appear last.

Treatment and prophylaxis are in general along the most up-to-date ideas. It has been remarked that Dr. Ker uses small doses of alcohol in treatment more frequently than is the practice in this country—and to no better advantage than that obtained by other means.

Perhaps the use of convalescent serum in scarlet fever could have had more favorable mention.

F. C.

FUNCTIONAL NERVE DISEASE. An Epitome of War Experience for the Practitioner. Edited by H. Crichton Miller, M.A., M.D., Formerly Medical Officer in Charge of Functional Cases, No. 21 General Hospital, Alexandria, etc. London: Henry Frowde, Oxford University Press, Hodder & Stoughton, Ltd., Warwick Square, E. C., 1920. Price, \$4.50.

This book is a collection of eleven short essays on different aspects of functional nerve disease by men who have had experience in British war hospitals. It is given a formal unity by division into four parts, namely: The Physical Factor, The Hysterical Factor, The Anxiety Factor, and The Management of the Neurotic.

The dominant note is the importance of psychic factors in functional nerve disease, but the contributory effects of strain, shock, endocrin disturbance, and toxemia are not neglected.

The pathogenesis of functional nervous disorders is explained in Freudian terms: repression, regression, complexes and unconscious mental conflicts. The contributors do not explicitly refer these neuroses to infantile sexuality and it is therefore uncertain whether they are strictly Freudian or not.

Treatment is essentially psychical and consists of two steps, namely: (1) rendering the patient aware of these contents of the mind which are out of harmony with the whole; (2) the readjustment of his attitude toward these contents. In the discussion of the technique of treatment considerable attention is given to hypnosis and hypnoidal states, and also to psychoanalysis, these methods apparently having been employed much more freely than in the United States Army hospitals.

The book as a whole is interesting and suggestive and will repay careful reading. Among the illuminating points of view is the threefold contrast of, (1) functional palsy as a suppressed thought acting through the central nervous system; and (2) anxiety neurosis as a suppressed emotion acting through the visceral nervous system. Amnesia is extended in meaning to include anything excluded from awareness whether it be thought, movement or sensation. A third point of interest is the recognition of the fundamental importance for modern psychopathology of the teachings of Hughlings Jackson on the dissolution of the nervous system.

The final chapter is a summary of the teachings of the book. It is written with the balance and moderation that one is accustomed to expect from Professor McDougall. Americans will be specially interested in the point of view expressed because of the writer's recent appointment as Professor of Psychology at Harvard University.

A. L. S.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., FEBRUARY, 1921.

NUMBER 2

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3529 Pine St., St. Louis, Mo.

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ORIGINAL ARTICLES

THE PATHOLOGY OF THE THYROID*

GEORGE IVES, M.D.

ST. LOUIS

It is doubtful if I would be justified in consuming your time if my subject has no practical relation to clinical medicine. I hope, in the presentation of my subject, to show that pathological laboratory methods are necessary for the proper study and frequently for the recognition of thyroid diseases, and further that a knowledge of the pathological anatomy of thyroid diseases assists the clinician in making a purely clinical diagnosis and in applying the proper medical and surgical treatment.

A purely anatomical study of pathological thyroids is of little interest to most of us. When this pathological study is associated with clinical observations it should be of great interest to every physician. Disturbances of the thyroid fall within all fields of medical practice. A study of pathological thyroids is a prerequisite to the highest type of work in both the surgical and medical aspects of thyroid diseases.

For the proper study of the pathological thyroid we should prepare ourselves with certain fundamental knowledge of the embryology, the anatomy, and the physiology of the thyroid. It is impossible to become competent in any clinical department dealing with thyroid diseases if these subjects are neglected. It is not my purpose to review these subjects, but it probably will be evident from what I shall say that they offer much information which becomes useful in the interpretation of clinical and pathological findings.

My discussion of the pathology of the thyroid will be based almost entirely on specimens which I have observed and studied personally. There are numerous pathological lesions of the thyroid which have never come to my atten-

tion. The latter, which include the thyroid in infectious diseases, in focal infections, in drug intoxications, etc., may well be omitted because of the necessity of limiting the discussion to reasonable bounds since these lesions have an importance secondary to those which will be considered, and because it is my belief that my paper should be based upon personal experiences and observations. Since my experience with the thyroid has been confined to a study of surgical specimens, my discussion must be limited to those diseases which in common practice are surgical diseases.

A study of the normal must always precede a study of the abnormal. We must realize that the dividing line between the two is not always distinct. This fact makes it desirable to know so far as possible what may be termed normal variations in the thyroid. We should have a conception of the normal size and weight of the thyroid. Pathological thyroid specimens should be weighed, and the pathologist should know approximately how much of the thyroid has been removed. A simple calculation will then make it possible to determine the presence or absence of goiter.

The histological appearances of normal thyroids are subject to variations. Variations in the functional activity of the gland under normal conditions may reflect themselves in various histological pictures, all of which may be normal. In my own experience these minor variations are rarely a matter for consideration because almost every surgical thyroid specimen can readily be placed in its proper class.

The first illustration (Fig. 1) represents a section of normal thyroid gland. It will be noted that the vesicles or alveoli contain a peculiar substance called colloid. The alveoli are lined usually with a single layer of cuboidal epithelium. As the alveoli becomes larger, that is, more distended with colloid, the epithelium becomes flattened. The gland is divided into lobules by means of connective tissue septa extending from the capsule. This lobulation is to be observed grossly and micro-

*Read before the St. Louis Medical Society, Dec. 7, 1920.
From the Laboratory of the Missouri Baptist Sanitarium.

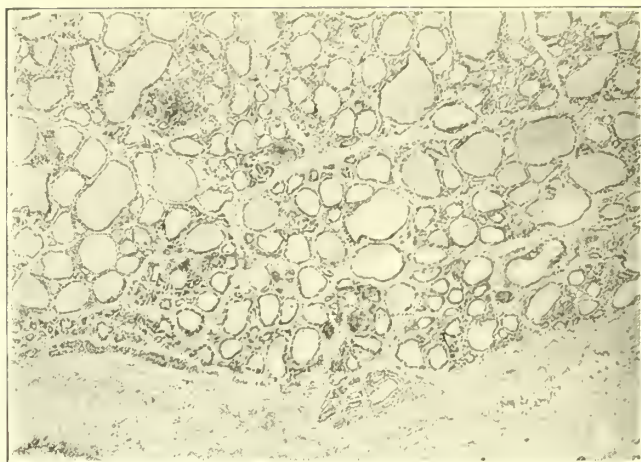


Fig. 1.—Normal thyroid gland.



Fig. 2. Carcinoma of thyroid.

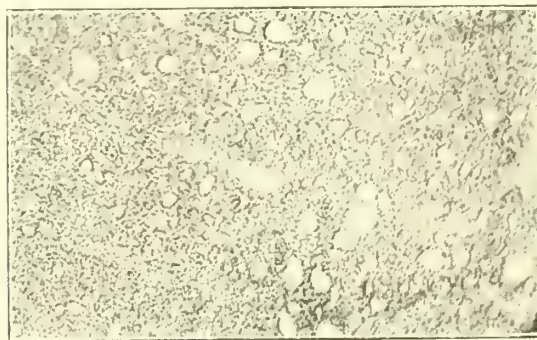


Fig. 3.—Benign metastasizing struma.



Fig. 4. Thyroid adenoma at base of tongue

scopically in the normal, and in some pathological thyroids. The observation of lobulation or its absence is an aid to the diagnosis of thyroid diseases pathologically.

The first pathological specimen (Fig. 2) is that of carcinoma of the thyroid. I shall dismiss the subject of carcinoma with a few remarks. This condition is rather rare, forming, according to the statistics of the Mayo clinic, approximately 1 per cent. of the goiters observed in that clinic. Carcinoma is not a disease peculiar to the thyroid and in this organ it deserves the same general considerations that apply to its presence elsewhere. This carcinoma was an accidental finding in an operation on a case of acute infection of the neck. It may not be a primary carcinoma of the thyroid. I show this slide simply to call attention to the subject of carcinoma of the thyroid.

There is no specimen in our collection which has been of more interest to me than the one shown in Fig. 3, a section of a central tumor in the upper end of the humerus. There was a history of several pathological fractures. I made an immediate frozen section at operation. My immediate report was about as follows: "Adenomatous tissue resembling thyroid; histologically it has not the appearance

of malignancy, but since it is epithelial tissue in bone it must be of metastatic origin; therefore, I look upon it as carcinoma." The permanent sections showed the presence of colloid substance. This made it certain that we were dealing with thyroid tissue. Upon consulting textbooks I found described a condition called benign metastasizing struma. I then recognized this to be the condition with which we were dealing. The patient is well nearly two years after an amputation of the arm. This condition, although of metastatic origin, must be separated from true carcinoma. It is histologically benign and clinically it is relatively benign. The recognition of the condition never justifies operative procedures on the thyroid gland, for it has not been observed associated with true carcinoma of the thyroid.

We have next for consideration a thyroid adenoma (Fig. 4) at the base of the tongue. This section represents a portion of the tumor and the epithelium of the tongue. The embryology of the thyroid offers a partial explanation for the occurrence of thyroid tissue in the region of the base of the tongue and in other abnormal locations. Embryology does not tell us why such a condition occurs in some individuals and not in others. We have an explanation which applies for such conditions as congenital goiter, persistent thyroglossal duct and aberrant thyroid tissue which has strong support in both clinical and experimental data. This explanation is, that these anomalies are due to hypothyroidism in the mother of the individuals in whom they occur. A diagnosis such as has been made in this case not only requires an interpretation based upon the embryology of the thyroid, but it suggests that a study of the mother of the individual from whom this tumor was taken might prove both interesting and profitable. It suggests also a similar study in other thyroid diseases.

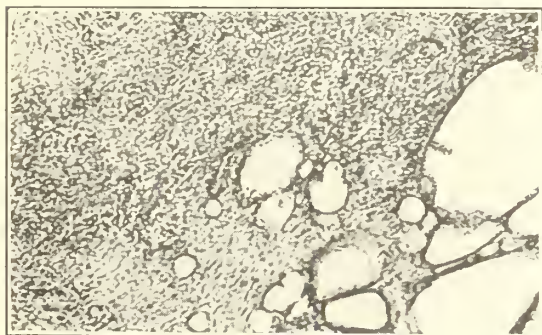


Fig. 5.—Woody thyroiditis.

There is a condition of the thyroid in which

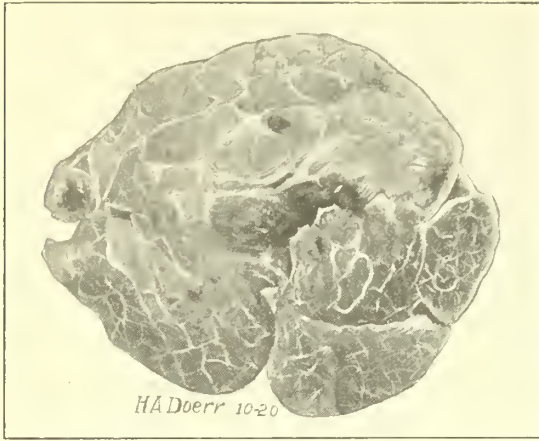


Fig. 6.—Diffuse colloid goiter.

the gland is transformed into a hard fibrous mass. Almost everyone, it seems, who has been concerned with the condition has mistakenly called it carcinoma at some time or other. The condition was first described by Riedel in 1896 who called it "eisenharte strumitis" (iron-hard strumitis). It is now more commonly called "woody thyroiditis." The gland is transformed into dense fibrous connective tissue. The true woody thyroid usually develops rather rapidly. It is painful and the inflammatory condition usually extends beyond the boundaries of the gland and may be associated with similar conditions elsewhere. That the nature of the disease may be similar to Mickulicz disease (granuloma of the lachrymal and submaxillary glands) has been suggested. It may develop upon a previously normal gland or upon a goiter. In our case the parenchyma tissue at the upper pole (Fig. 5) suggests adenoma and the presence of calcium deposits in this specimen also suggests a common type of goiter. I have mentioned that this condition is mistaken for carcinoma. This erroneous interpretation is due to the presence of parenchymatous cells in the connective tissue.

It seems probable that "woody thyroid" may

designate more than one condition. It may in certain cases be a granuloma, as obscure in its etiology as Hodgkin's disease, and in others it may represent a stage in the involution of various common types of goiter. I am not inclined to believe, since all goiters tend to approach the condition of fibrosis, that hard, fibrous goiters represent a single condition etiologically. The diagnosis "woody thyroid" should probably be restricted to a certain clinical condition in which the thyroid is found to be as I have briefly described it.

We now come to a consideration of the common types of surgical goiter. In my experience there are three common types of surgical goiter: exophthalmic goiter, diffuse colloid goiter, and adenomatous goiter. The rela-

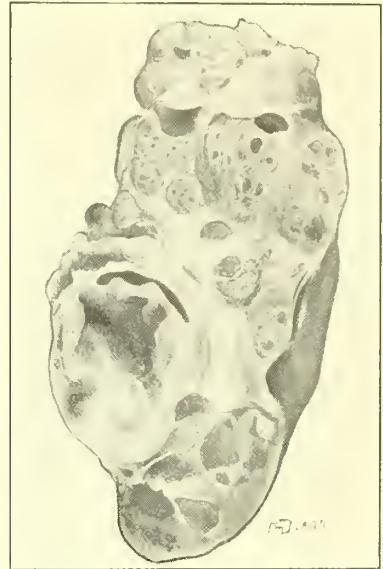


Fig. 8.—Colloid adenomas; cystic.

tive frequency of these goiters in my own experience is indicated by my diagnoses of thirty specimens removed in thirty consecutive goiter operations: exophthalmic goiter 12, adenomatous goiter 12, and diffuse colloid goiter 6. It is exceptional in my experience to observe an association of two distinct goitrous conditions in the same specimen. However, I have observed adenoma associated with both simple colloid goiter and exophthalmic goiter.

A diagnosis of colloid goiter, either clinically or pathologically, is wholly unsatisfactory because all the common goiters may be colloid goiters in some stage of their development. Simple colloid goiter is a distinct entity. The etiological factor in this disease has been thought to reside in drinking water. It is frequently cured by the administration of iodine or the iodides. It may be a diffuse or a nodular growth. I have observed no simple nodu-

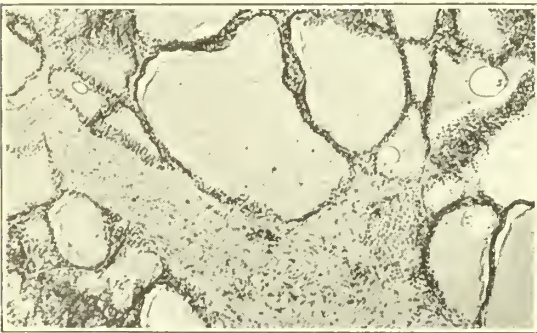


Fig. 7. Simple diffuse colloid goiter.

lar colloid goiters. We have represented in Fig. 6 a gross section of a simple diffuse goiter as it appeared to an artist. In such goiters the distended vesicles filled with colloid are visible to the naked eye. This condition together with the prominence of the septa gives the specimen a honeycomb appearance. The presence of lobulation indicates that the patho-

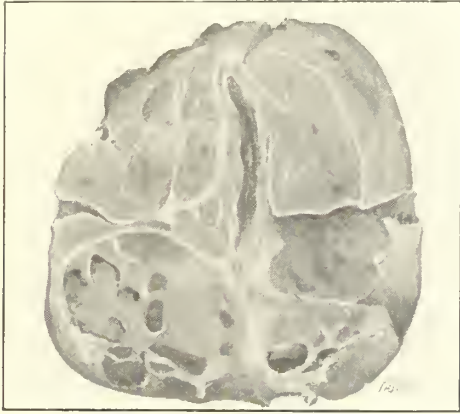


Fig. 9.—Colloid adenomas.

logical process is diffuse. Fig. 7 is a photograph of a section of a simple diffuse colloid goiter. The chief points to be observed are the distended vesicles, the flattened epithelium and the scarcity of interalveolar stroma.

This type of goiter is subject to various changes in the course of its development. These changes may obscure the original and essential condition. The distension of the alveoli by colloid leads to a flattening of the epithelium and the interalveolar tissue may atrophy and disappear. This constitutes an explanation for the presence of cysts in colloid goiters. Necrosis, hemorrhage, mild inflammatory reactions, calcification and fibrosis are with more or less frequency observed in goiters of this simple colloid type. Whereas a goiter of this type may at an early stage be curable by medical means, it is evident that, when these secondary changes become a prominent feature of the goiter, it belongs to the class of surgical goiters.

The subject of adenoma of the thyroid is of very great interest and importance. I have already called attention to two types of thyroid adenoma outside of the thyroid, viz., adenoma at the base of the tongue and benign thyroid metastasis. The presence of adenomas in the gland itself is a very common condition, and this condition will now receive our attention. As I have already stated adenomas may be present in the diffuse colloid goiter and in the true exophthalmic goiter. I have observed it in such cases where it has been an accidental finding and where the adenomas had no

bearing on the clinical condition. I have also observed adenoma of the thyroid at autopsy in a case with a purely negative thyroid history.

Figs. 8 and 9 are good representations of adenomatous goiters. It will be noted that the gland consists for the most part of multiple, circumscribed, encapsulated tumors. It is frequently difficult or impossible in such goiters to demonstrate normal gland tissue. This disappearance is undoubtedly due to the pressure of the growing tumors. These tumors are subject to the same secondary changes which occur in the simple colloid goiter. The so-called fetal adenoma is transformed into a colloid adenoma, and this latter condition is subject to cyst formation, necrosis, hemorrhage, inflammation, calcification and fibrosis. It is not essential that the adenoma pass into the stage of colloid goiter to show all of the secondary changes mentioned. Some of the features of secondary changes in an adenomatous goiter are well illustrated in Figs. 8 and 9.

Fig. 10 represents the microscopic appearance of a fetal adenoma. In its incipency this tumor is made up of groups of parenchyma cells separated by more or less stroma. There are no vesicles and no colloid is present. Each group of cells is capable of forming a vesicle in which colloid appears. When this transformation takes place we have the so-called adult adenoma. Both the fetal and adult types of adenoma may be observed in Fig. 10. The proliferation in adenomas is centrifugal, hence the fetal type of tissue is likely to be observed toward the surface of the tumors, and the adult type of growth with secondary changes

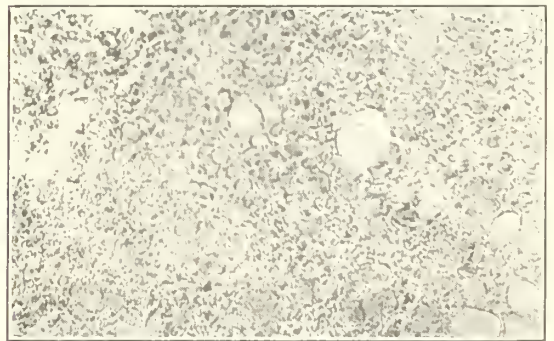


Fig. 10.—Fetal adenoma of the thyroid.

is likely to be observed near the center. This fact in itself accounts for the fact that these tumors are rarely homogeneous.

The adenomas are transformed into colloid goiters by the same process that normal thyroids are converted into colloid goiters, viz., the enlargement of the vesicles due to their distension by colloid substance. Cyst forma-

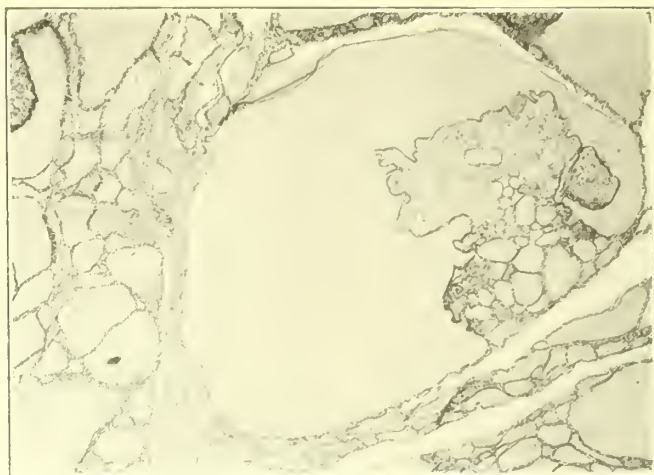


Fig. 11.—Colloid cystic adenoma.

tion, hemorrhages, necroses, inflammation and fibrosis, are usually to be observed in adenomatous goiters.

Fig. 11 is a section of cystic colloid adenoma. I would not insist upon the correctness of this diagnosis if I did not know that the gross features of this tissue were that of circumscribed tumor. This section illustrates to me the stages in development from a fetal adenoma, to an adult adenoma, to a colloid adenoma, and lastly to a cystic colloid adenoma. At this point the surgeon prevented the tumor from completing its life cycle.

Exophthalmic goiter has appropriately been called a dramatic disease. This is the third of the group of common goiters and will now receive our consideration. There are different clinical and pathological types of exophthalmic goiter, or Graves' disease. There are various clinical and pathological types of tuberculosis, but etiologically they are the same. Likewise the occurrence of distinct types of Graves' disease is not proof that all

the types are not essentially the same. But whether they are essentially the same or essentially different, it seems proper and necessary that the clinician classify his cases in so far as available information will allow him.

There is a clinical type of Graves' disease in which the apex of intensity of the intoxica-

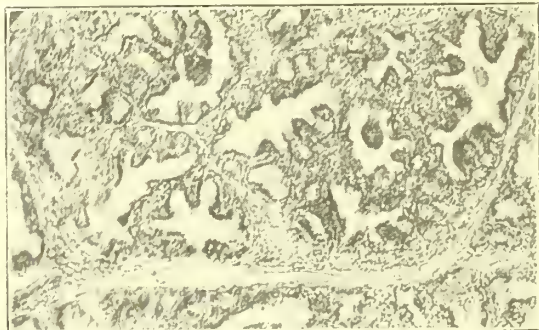


Fig. 13.—Exophthalmic goiter.



Fig. 12.—Exophthalmic goiter.

tion is reached late in the first year of the disease. If the patient survives the first year there is a spontaneous decline in the toxic manifestations of the goiter during the second year. At the end of the second year there is likely to be a second wave of toxicity, of less intensity however than the first wave. This is the type that everyone would call true exophthalmic goiter. This is the clinical type of the disease in approximately 75 per cent. of operated toxic goiters. This clinical type has a very definite pathology. Fig. 12 represents the gross specimen of true exophthalmic goiter. The lobulation is to be observed. This alone distinguishes the specimen from adenoma or carcinoma. The lobulation further indicates that the pathological process is diffuse. Such a thyroid has an opaque appearance in distinction to the simple colloid goiter

which is translucent; it is more firm than the normal gland or the colloid goiter. These characteristics are intelligible when we view the microscopic characteristics of the altered gland (Fig. 13). Compared with the normal microscopic picture, previously shown, this picture is markedly abnormal, but the anatomic principles underlying this change are essentially simple. The normal lobulation is to be noted. The individual parenchyma cells are larger than normal (hypertrophy). There is a hyperplasia, or increase in the number of parenchyma cells, which accounts for the papillary projections into the alveoli. These processes of hypertrophy and hyperplasia operating on the parenchyma account for the chief and most striking alterations of the thyroid in exophthalmic goiter. These processes of hypertrophy and hyperplasia need not of themselves produce an actual goiter, for these changes may be offset, in so far as a change in the size of the gland is concerned, by a diminution in the size of the alveoli and in the amount of colloid substance. Only when hypertrophy and hyperplasia quantitatively are in excess of the diminution in the amount of colloid is there goiter, granting that other factors remain constant.

The colloid substance in an exophthalmic goiter is not only diminished but it may be absent. When it is to be demonstrated it is altered. It is thinner than normal, and has an altered staining reaction. It no longer has a hyaline, homogeneous appearance, in sections, but it is frequently represented as a granular precipitate.

The type of exophthalmic goiter under consideration does not produce a constant histological picture. In fact, no two pictures are exactly alike. We should keep in mind that the variations in these pictures in different goiters is largely an expression of various degrees of hypertrophy and hyperplasia. Factors to be considered in accounting for these variations are the duration and the intensity of the disease. Wilson, by studying sections without clinical data, was able to state with a high degree of accuracy the duration and the intensity of the disease.

Of the several conditions affecting the thyroid which pathologists have mistakenly interpreted as malignancy, the exophthalmic picture is one of them. From the examination of a single section I can appreciate the possibility of such an error, but when the gross specimen and the sections are available for observation such an error seems wholly without justification.

The late pathological picture in the exophthalmic thyroid has not been observed by me. Exophthalmic goiter is a self-limited disease, at least in so far as hyperthyroidism is con-

cerned. Surgeons operate to cure or to diminish hyperthyroidism. When the hyperthyroidism has spontaneously ceased, the thyroid is still pathological but there is usually* at that time no indication for thyroidectomy. This fact accounts for my unfamiliarity with the end stages of thyroid pathology in exophthalmic goiter. We are told however that the late picture is that of atrophy of the parenchyma, fibrosis and colloid involution.

I have described briefly and incompletely the pathology of the classic exophthalmic thyroid. Twenty-five per cent. of the operated toxic goiters do not present the picture described. In this group we have adenomas, colloid goiters, and very rarely normal thyroids and other conditions. These two groups of toxic goiters may usually be differentiated on clinical data.

I do not interpret these observations as pointing to two or more diseases in the Graves' syndrome. The classic exophthalmic goiter may be the result of the disease acting upon a previously normal gland, and other clinical and pathological types may be the result of the disease acting in the presence of previously diseased thyroids.

University Club Building.

STUDY OF INFLUENZA-PNEUMONIA BY SERIAL ROENTGEN-RAY EXAMINATION*

L. R. SANTE, M.D.

ST. LOUIS

The pneumonias accompanying the epidemics of influenza during 1918-1919-1920 will, I think, by common consent, be accredited as the most lawless of all infections, both in the profusion of physical signs in some cases and in their utter lack in others.

Situated as we were in a 3,000 bed debarkation hospital with the resources of the army at our disposal, we were in a very favorable position to study the condition. It is quite obvious that the pathologist can only see one phase or stage of an individual case and only by a tremendous number of examinations can he come to any conclusion concerning the intermediate stages of the disease. We, therefore, felt that with serial roentgen rays of the chest taken at from one to three day intervals as the progress of the case required, we would be in a much better position to judge the mode of onset, progress and ultimate termination of the case, and after the study of a great number of cases by this method, to give a more or less accurate statement as to the prognosis.

*Read in the Scientific Motion Picture Exhibit, American Medical Association, New Orleans, April 26-30, 1920.

In an endeavor to throw some light on these points we examined several hundred cases of influenza-pneumonias from a clinical standpoint, recorded our findings and endeavored to correlate them with laboratory findings of excretions and blood examinations, and those of serial roentgen-ray plates.

It was thought that some type of invasion might be characteristic of a certain organism; that Type I pneumococcus, for instance, might prevail in certain types of bronchopneumonia; that the streptococcus hemolyticus likewise might have some particular type of invasion. It was found very soon, however, that this was not the case; for any of the organisms—pneumococcus Types 1, 2, 3 or 4, streptococcus or streptococcus hemolyticus—may be associated with any of the types of pneumonia or modes of invasion.

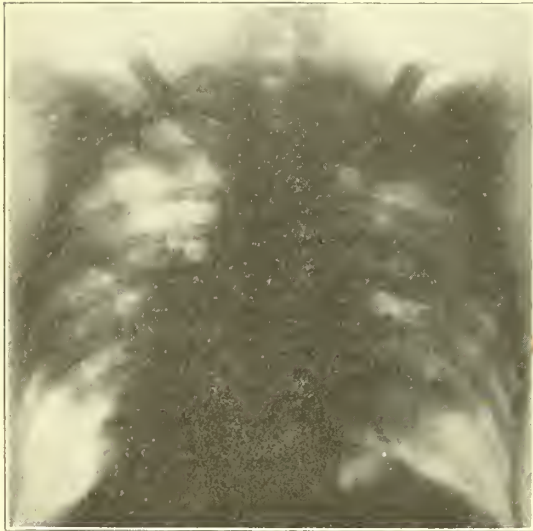


Fig. 1.—Peribronchial infiltration involving all lobes.

A careful analysis of the cases examined showed in general six modes of invasion manifested by the pneumonic process:

1. By peribronchial invasion with small areas of consolidation which enlarge and become confluent to form solidification and are not confined to any one lobe but affect all of the lobes alike—true bronchopneumonia.

2. Those which involve a single lobe only but invade by the same peribronchial route—likewise true bronchopneumonia.

3. Those which commence radiographically as a general haze over a part of the lung area and progress uniformly over the entire involved area, in a manner very similar to the radiographic appearance in the invasion of a lobar pneumonia, suggestive of a lymphatic or hematogenous origin; these prove at necropsy to be an atypical bronchopneu-

monia, probably the "diffuse pneumonitis" so often described.

4. Those which involve the hilus region only, the so-called "critical pneumonias" of Ewing of Cornell.

5. Those which start below in the most dependent portion of the lung and spread upwards seemingly by continuity of tissue, atypical pneumonias unassociated with fluid and usually very fatal.

6. Very rarely a true lobar pneumonia.

Figure 1 shows a typical bronchopneumonia throughout both lungs, especially about the bronchi the areas of infiltration are seen. Note first, the character of the lesion, definite, small, soft infiltrations; then the distribution which it will be seen is not to any one lobe in particular, but affects rather the peribronchial tissues of all of the lobes. Considering the pathology of a bronchopneumonia, as we are accustomed to think of it, the small infiltrations illustrated about the bronchi conform very well to what we would expect. As a rule bronchopneumonia affects the lower three-fourths of the lung first and leaves the apices free until last. In this case the apices are quite free, thus helping to differentiate the condition from a tuberculous process.

The second type is well illustrated by Figure 2, which is a true bronchopneumonia, clinically and radiographically, and has involved the lower lobe by a coalescence of fine infiltration. Sometimes the different lobes of the lung are invaded one after the other, and all the lobes on one side may be involved in a massive pneumonia leaving the other lung quite free. Here we see the resolution of the pneumonic process without further advancement of the lesion. By far the greatest number of influenza pneumonias are of this type.

The third type is one which starts as a general haze over one portion of the lung, much the same as a lobar pneumonia. This increases with uniform rapidity throughout the involved area. Figure 3 is an illustration of this type.

A young, well-developed, negro patient was in the hospital for an otitis media when his lung condition developed. At its onset the condition was quite naturally mistaken for an acute mastoid and he was prepared for operation. A chest plate, however, showed this diffuse haziness involving the entire right chest. The surgeons were cautioned to wait for twenty-four hours and at the expiration of this time definite consolidation was present and the entire side became involved within thirty-six hours and progressed until one week later death resulted. Necropsy showed an atypical bronchopneumonic process, "diffuse pneumonitis."

The next type of invasion is one in which

the infection is prevalent in the hilus region only. Clinically, this type presents little if any physical signs at the outstart, and is very confusing. These are what has been termed "critical" pneumonias by Dr. Ewing of Cornell, on account of their speedy advancement and death. In this type we feel that the advantage of the roentgenologist over the pathologist, in being able to follow patients

of this area associated with the streptococcus hemolyticus usually caused death, the pathology, being that described by Dr. Ewing as a zone of hemorrhage and pus completely en-sheathing the bronchi and sweeping out to the periphery; whereas those associated with the types of pneumococcus make rapid recoveries.

Another occasional variation which we have noted in association with involvement of this

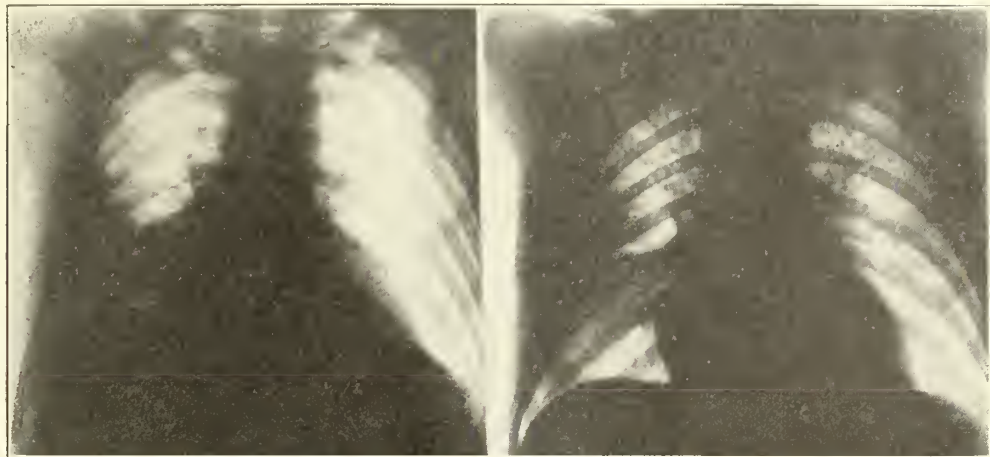


Fig. 2 (Plate 1).—Lobar distribution of a bronchopneumonia showing gradual resolution of consolidation of lower lobe.



Fig. 2 (Plate 2).—Lobar distribution of bronchopneumonia with ultimate complete resolution.

throughout their illness to see not only those cases which come to necropsy, but also those who recover, is particularly shown. Whereas the pathologists feel that these critical pneumonias are always very fatal surely we have a number of cases, well illustrated by Figure 4, where a consolidation of the hilus region unattended by discernible physical signs was followed by a drop in temperature by crisis and an ultimate and rapid restoration to normal. It was our experience that pneumonia

area, is an activation of a previously existing but quiescent tuberculous process. This is well illustrated by a case which represents a post-influenzal involvement of the hilus region.

About five days after the patient was allowed to be up and about, an afternoon temperature started and a radiograph revealed a small cavity within the hilus consolidation. This cavity enlarged from 0.5 inch to 4 inches in diameter in two weeks' time. For the past

several months the patient has not shown any change of consequence and tubercle bacilli have been found in her sputum.

The fifth type is one in which the most dependent portion of the lung is involved first and the condition progresses upward, seemingly by continuity of tissue, with a rapidity almost incredible, producing an atypical pneumonia, unassociated with fluid and rapidly

the entire lung and was unassociated with fluid.

So rarely do we get a true lobar pneumonia that it is questionable as to whether it belongs in this analysis as complicating influenza. Occasionally, however, from the history and physical signs, a case of this type is encountered which could not have been differentiated from one of the other types of in-

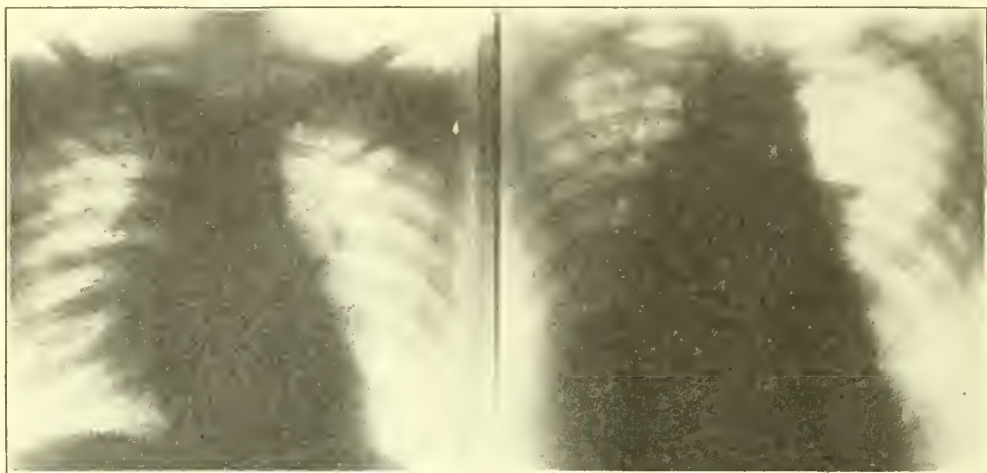


Fig. 3 (Plate 1).—Commencing radiographically as a general haze. Consolidation rapidly follows.



Fig. 3 (Plate 2).—Later stage showing complete consolidation and death.

causing death. This is usually associated with streptococcus or streptococcus hemolyticus. In Figure 5 it will be noted that the small area in the costophrenic sinus is all that was involved on first examination, and that within twenty-four hours one-half of the lung was involved. In twenty-four hours more, when we returned for another plate, the patient was dead and necropsy showed an atypical bronchopneumonia which had extended to involve

fluenza-pneumonia until the subsequent course of the disease revealed its nature.

Figure 6 is included to show such a case, the first plate being taken two hours before crisis, and the second plate three days after crisis, showing complete resolution.

This shows the very short time necessary for resolution of a lobar pneumonia. This is only what would be expected when one recalls that no really destructive process is present,

the consolidation being due to cells, serum, and fibrin, in this type, whereas the long time necessary for the other atypical types of bronchopneumonia, four to six weeks, is only to be expected when one sees at necropsy the areas of tissue destruction which must be replaced by the reparative process.

These classifications are, of course, more

progressing very favorably with resolution, would suddenly develop an extension into another lobe and die; while another case would go the round of all the lobes with successive consolidation and resolution in all and ultimately recover. One case with only a small amount of lung tissue involved would result fatally; while another with a relatively much

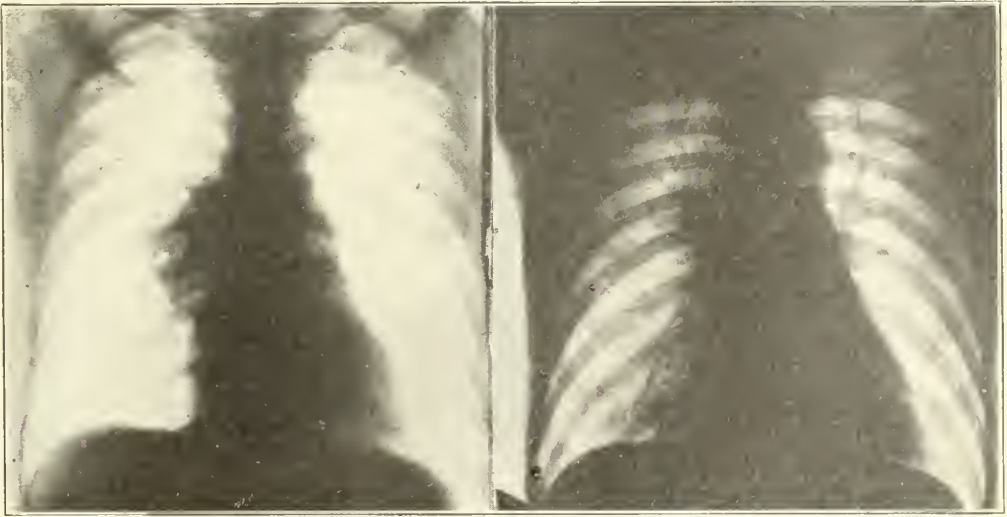


Fig. 4 (Plate 1).—Hilus, so-called "critical pneumonia," with progressive resolution after fall of temperature by crisis.

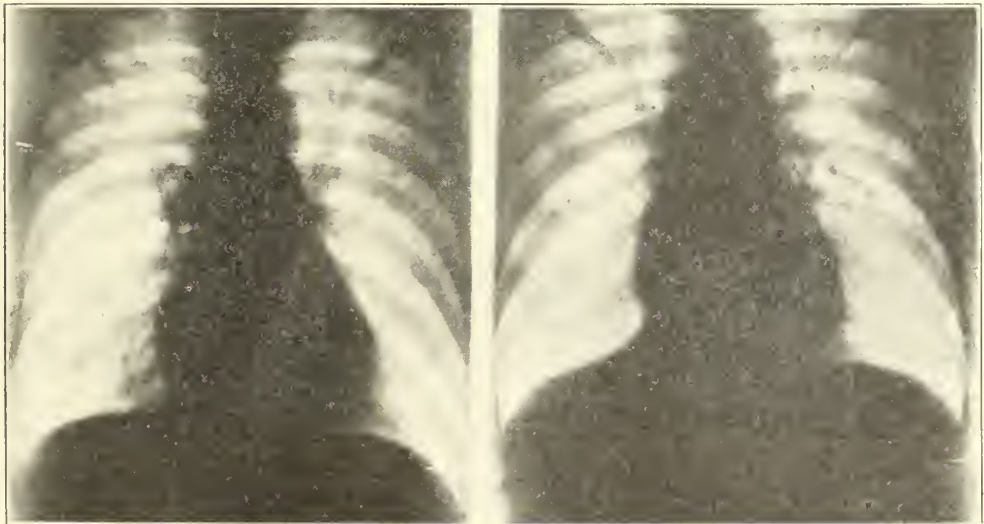


Fig. 4 (Plate 2).—Later stage showing complete resolution of hilus pneumonia.

or less arbitrary and artificial, yet they serve to help us to classify the character of the infection with which we are dealing and help us at times to determine prognosis. That the prognosis could not be determined with any great degree of consistency was very soon found out. One case, which was presumably

greater involvement, even one entire lung in a massive pneumonia, would ultimately clear up. In spite of this apparent contradiction in a great number of cases, by following the progress of the case from day to day by serial radiographs, a fairly accurate prognosis could be given.

CONCLUSIONS

1. That there are six general modes of invasion in the influenza-pneumonias as revealed by serial radiographs of a large number of patients.

2. That these types of invasion suggest the

4. That while prognosis could not be accurately determined in all cases, in a great number a fairly accurate prognosis could be determined by a careful study of serial roentgen-ray plates.

1115 S. Grand Ave.



Fig. 5.—On first examination a small consolidation in the costophrenic angle was noted. Within twenty-four hours half the lung was consolidated. Death within forty-eight hours.

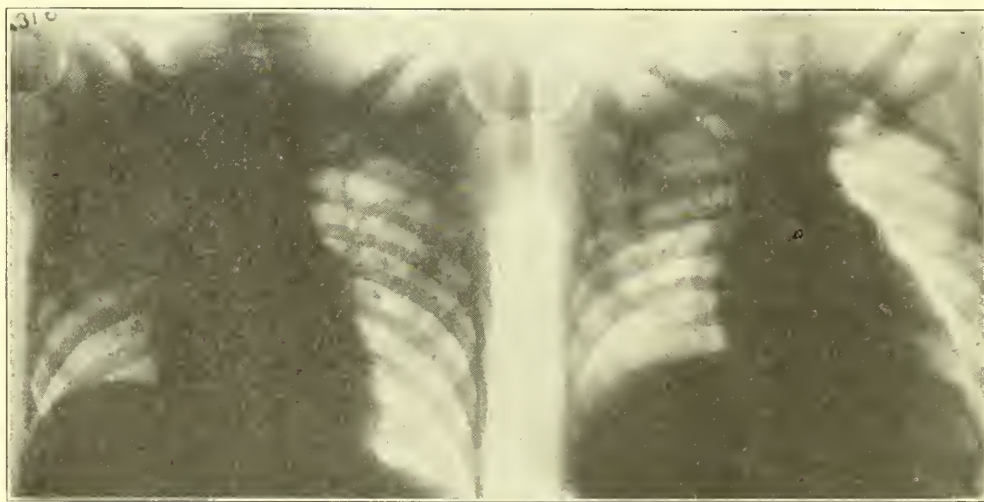


Fig. 6.—True lobar pneumonia taken just before the crisis. The second plate taken three days after crisis showing complete resolution.

medium of conveyance of the infection by blood or lymphatics or by bronchi in each case.

3. No particular type of organism is responsible for any particular type of invasion; any type may be associated with any of the organisms commonly found, pneumococcus 1, 2, 3, 4, streptococcus, or streptococcus hemolyticus.

OVARIAN SUBSTANCE

G. D. ROYSTON, M.D.

ST. LOUIS

Many claims are made for or against the various therapeutic results obtained after the administration of extracts of the ductless glands. Glowing reports from one investiga-

tor will often cause certain members of the profession to demand 100 per cent. cures of all vague and more or less undiagnosed conditions by the administration of the "Cure All," and when such a perfect result fails of attainment the therapeutic agent in question is discarded and condemned.

While we possess some knowledge concerning the ductless glands we do not know all about any one of them. Their interrelation and dependability upon one another, as well as their very close association with the sympathetic nervous system, metabolism, etc., further tend to obscure our views regarding functional and organic derangements of the endocrine system.

Such constitutional affections as syphilis and nephritis, with their consequent fibrosis, only too often exert more or less permanent organic as well as functional disorders of the endocrines. Tuberculosis, with its influence upon metabolism, is another source of functional disturbance. Tumors and inflammatory involvements also play a role.

So long as the operation of oophorectomy enjoys its present day popularity, just that long will all places sought by these unfortunate sufferers for relief be overpopulated. The parenteral administration of the soluble extract of corpus luteum in such conditions as menopause, menstrual disorders, nausea, vomiting of pregnancy, etc., renders this substance of great therapeutic value at the present time.

The question as to the specific function of the so-called interstitial gland of the ovary and that of the corpus luteum prompted me to apply clinically a soluble preparation of the entire ovary, known as ovarian substance. I am able to submit the reports of 31 patients treated. An attempt was made in this series to avoid the indiscriminate administration of the substance and to divert its use to those patients with more or less clear cut indications. Some of the patients treated had so many complications that it does not seem that any one condition is responsible for the symptoms exhibited.

For example, a perfect cure from the use of ovarian substance alone could hardly be expected in the case of a patient with a 4 plus Wassermann, suppurative sphenoidal sinusitis, otitis media, refractive errors of vision, artificial menopause and chronic constipation. The conditions for which ovarian substance was administered are as follows:

Artificial Menopause.—Eight cases, of which six showed rapid improvement and a disappearance of practically all symptoms. Two patients showed but little change; one of these patients, Z. C. (No. 36,500), had a 2 plus Wassermann, phenolsulphophthalein output of 40 per cent and was diagnosed by the neuro-

logical service to have a constitutional psychopathic inferiority and a suspected intracapsular hemorrhage. The other patient, V. L. (No. 31,586), had a 4 plus Wassermann, suppurative sphenoidal sinusitis, otitis media, presbyopia and hypermetropia, and chronic constipation, although her Wassermann reaction became negative, ovarian substance failed to relieve her symptoms to any appreciable extent.

In addition to these eight cases, one additional patient, O. T. (No. 54,515), complained of irregular and profuse menses every 15 to 30 days, duration six to seven days, following oophorectomy and double salpingectomy. Examination revealed the left ovary to be about the size of a hen's egg and a gonococcus infection of the cervix. The patient was treated locally with 10 per cent. silver nitrate and kaolin for the gonorrhea and was given ovarian substance, 2 c.c. intravenously, once a week for two months. At the end of this time there was no palpable enlargement of the ovary and the menses reappeared at normal 28-day intervals, five days' duration and normal amount. Her hysteria, diagnosed in the neurological service, had apparently disappeared. The local improvement in the pelvic condition was probably due to the local treatment administered, although gonococci were still demonstrable in the cervical smears when patient ceased coming for treatment.

Menopause (Natural).—Two cases. A. H., age 35 (No. 39,685), complained of backache, headache, hot flushes, leukorrhea, bearing down feeling in the pelvis and chronic constipation. She gave a history of epileptiform attacks since a nervous breakdown one year previously. Examination revealed a uterus in movable second degree retroversion with subinvolution, relaxed pelvic floor and splanchnoptosis. The patient was given a suitable diet and mineral oil for constipation, uterus replaced and pessary inserted; referred to the department of hydro and physical therapy for massage and Scotch douche and given ovarian substance subcutaneously once a week. The hot flushes disappeared after the third injection, other symptoms remaining unchanged until after abdominal hysterectomy and repair of pelvic floor, following which patient has remained perfectly free from all symptoms two years after operation.

Second case, E. D., Para 3, applied at dispensary March 11, 1918, complaining of pain in back and epigastrium, hot flushes, headaches, extreme nervousness and constipation. Her menses began at 13, always regularly every 28 days, duration three days and moderate amount, until three years before; since then, menses have reappeared only two or three times a year, last time being nine months be-

fore coming to the dispensary. Examination revealed normal genitalia for a woman approaching the menopause (short smooth vagina, obliterated fornices, small uterus, etc.).

Diagnosis, menopause.

Treatment. Ovarian substance 1 c.c. subcutaneously once a week; on March 28, 1918 (4th injection), hot flushes had disappeared; headaches and fullness in head unchanged; slight local reaction at point of injection. On May 29, 1918 (seventh visit), patient reported that she was feeling perfectly well. Patient reported about once every four to six weeks (last time February 2, 1919) feeling very greatly improved in every way, though no menses had appeared.

Amenorrhea (Periodic).—Two cases. One showed improvement and apparently a very satisfactory response in a prompt menstrual flow for two or three successive months, after which the amenorrhea persisted despite treatment. The other case, age 20, single, applied at dispensary on March 28, 1918, complaining of pain in left arm, frontal headaches, irregular and infrequent menses, constipation. Her condition was diagnosed by the medical service as hysteria. Wassermann negative. Pelvic examination negative.

Treatment. Ovarian substance 1 c.c. once a week. April 27, 1918 (fifth visit), patient reports feeling much better, pain in left arm only once since beginning injections; menstruated April 10 to 14 (first time in seven months). On May 25, 1918 (ninth visit), flowed freely for four days. On June 22, 1918 (twelfth visit), no menses this month; patient states that she feels perfectly well. On July 20, 1918 (fifteenth visit), menstruated four days; feels perfectly well. On July 27, 1918 (sixteenth visit), discharged, feeling perfectly well.

Tardy Development of Genitalia (Hypoplasia).—One case, colored, widow, age 32, never pregnant (No. A-3,884), applied at dispensary April 29, 1918, complaining of dizziness, hot flushes, backache, headache, scanty menses. Menses began at 13, every 28 days, duration of four to five days until past year when flow became steadily less until at time of admission the duration is only one-half day. Married 12 years; never pregnant. Examination revealed a second degree fixed retroversion of the uterus which had a small corpus and a relatively long cervix, being of the so-called infantile type. Treatment. Ovarian substance 1 c.c. twice a week. May 15, 1918 (third visit), feels perfectly well except for an occasional headache. June 1, 1918, patient states that she feels perfectly well in every way except for an occasional headache. There was no increase in the menstrual flow.

Nausea and Vomiting of Pregnancy.—Sev-

enteen private cases. Ovarian substance 1 to 2 c.c. once or twice a week, according to severity of symptoms. Fifteen patients showed marked improvement, one doubtful and one not improved. Of the 15 greatly improved, 11 showed great improvement after the third injection and complete relief after the sixth injection; two showed marked improvement after the fifth and complete relief after the tenth injection, while two showed no improvement until after the sixth injection, suffering frequent recurrences until the end of the fourth month of gestation, requiring in all 12 and 14 injections respectively. One patient stated that she experienced immediate relief following the injection and often called for a prophylactic injection while en route to keep social engagements, in order to avoid an attack of nausea and vomiting in public. One patient had so many recurrences and ailments that it is doubtful if the relief the patient claimed from the injection was more than the psychic effect. One patient showed no improvement, but despite all measures continued to vomit throughout pregnancy.

CONCLUSIONS

Ovarian substance, administered subcutaneously and intramuscularly, is an agent of the greatest value in relieving symptoms caused by a deficient ovarian secretion. The intravenous administration is not advised at the present time because of reactions resulting in two patients in my series. These reactions both occurred immediately following the injection and exhibited the following symptoms: immediate and pronounced headache, nausea, faintness, hysteria, all of which continued for some 12 to 15 hours following the injection. In view of the fact that two reactions followed the intravenous administration of ovarian substance and none has resulted in my hands from corpus luteum, there seems to be some difference in their action. The most striking effect is shown upon those cases of menopause with an irritable sympathetic nervous system, for which the substance seems almost a specific in properly selected cases.

Certain cases of functional amenorrhea and nausea and vomiting of pregnancy are definite indications for the administration of ovarian substance, though it apparently has no advantage over corpus luteum in the latter condition. The results obtained will depend upon an accurate diagnosis and a proper selection of the cases treated.

503 Wall Building.

MILK-BORNE DIPHTHERIA.—An analysis is made by Jonathan E. Henry, Boston (*Journal A. M. A.*, Dec. 18, 1920), of an outbreak of diphtheria in Williamstown, Mass., which was traced to infection of a milk handler's finger with *B. diphtheriae*.

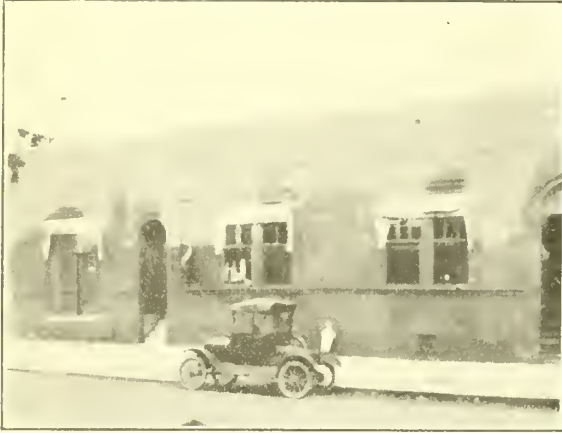
ent "education" of the mother, which is never general nor abstract but to the contrary, is at all times specific and individual.

The conception of this need as the basis of the entire scheme first to attract world-wide notice appeared in France in the year 1894, dating back approximately to the period of the milk fund associations in our country, the term "Goutte de Lait" coming into existence in that year and indicating, according to its originator, a station in which the feeding of infants would be supervised and directed by a physician to whom mothers and caretakers would report at stated and rather brief intervals, and with whom they would confer as to the immediate needs of the infants, all other measures being relegated to a position of relatively minor importance.

It is very interesting indeed to recall the history of this movement just at this time for,

Goutte de Laits was held and was presided over by Dr. Leon Dufour to whom credit was given for having originated the new idea.

It was this congress that gave impulse to the new movement more definitely and more tellingly perhaps than any other one thing, and it was here that the initiative taken by France was found to be not alone laudable in theory but sane and practicable in plan and worthy of emulation. So one may read in the statements of the delegates, of Dr. Lust representing Belgium, of Dr. Ulecia of Spain (from whom it was interesting to learn that Goutte de Laits had already come into existence in Barcelona, St. Sebastian, Logrono and Madrid, which was quite some time before the movement had started along similar lines in America). Credit for the new plan to France appears in the address of Dr. Graanboom of Holland, of Dr. Deutsch of Hungary, of Dr.



The "Laboratory" Station.



Laboratory "Clinic."

1726 N. 13th Street, St. Louis.

as in the United States, the Goutte de Lait was not a spontaneous creation but had its predecessors forging towards a common goal. Two of these in France bear special mention, namely the "Consultations de Nourrissons" opened by Dr. Pierre Budin in Paris at 91 Rue Falguiere in June, 1892, whose object was the supervision and direction of the welfare of the breast-fed baby, and the Milk Distributing Station (some years later on to become the famous Goutte de Lait de Belleville) opened by Dr. Henri Variot in Paris at 126 Boulevard de Belleville in July of the same year. But in mentioning either of these it is necessary to go still farther back and to state that Budin had his predecessor in the work of Dr. Herrgott in the maternities of Nancy, just as Variot had his predecessor in the work of Dr. Dufour in the little Norman town of Fecamp. In Paris, on October 20 and 21, 1905, the First International Congress on

Concetti of Italy, Dr. Johannessen of Norway, Dr. Oliverio of the Argentine, and in that of others.

In the address of Dr. G. F. MacCleary, Officer of Health of Battersea, one reads: "The Goutte de Lait was introduced into Great Britain in 1899 by the municipality of St. Helen's, upon the instruction of a Committee of the Council sent to investigate the Goutte de Lait at Fecamp . . ." "In seeking methods" (to reduce our infant mortality) he states, "it was altogether natural for us to turn towards that country which for a long time had shown its interest in the study of child culture and it is from our friends on the opposite shore of the channel that we acquired the idea of the helpful institution known as the Goutte de Lait." Stations were soon thereafter opened in numerous British cities, the term "Infant's Milk Depots" being used to replace the French term. The first of these, as was stated, was

at St. Helen's, which was opened in 1899, the next at Liverpool in 1901, these being followed by others at Ashton and Dukinfield in 1902, at Battersea in 1903, etc., the medical control of infants artificially fed gradually superseding in importance the mere distribution of milk, just as it did, a few years later on, here with us.

In July, 1906, a "Goutte de Lait," bearing this term upon its history sheets, was opened in St. Louis, under the auspices of the St. Louis Pure Milk Commission in the building in which was housed its laboratory, at 1726 North 13th Street. This station remained in operation twice a week during that summer and as well the following summer and thereafter was active throughout the succeeding years until, with the municipalizing of all such activities in St. Louis and the consequent retirement of private or purely philanthropic agencies, it was closed November 1, 1919, then in its thirteenth year.

We have been unable to procure any information pertaining to the existence in this country of an Infant Welfare Station patterned upon the French Goutte de Lait at an earlier date, our modest beginning in St. Louis being coincident with that in Cleveland where a very much more highly organized institution was established upon the plans of the Sauglingsfuersorgestellen of Berlin at exactly the same time.

819 University Club Building.

POISONING FROM WEARING DYED SHOES*

F. NEUHOFF, M.D.

ST. LOUIS

E. S., aged 15 years, clerk, born in United States, single, male. Family history reveals nothing of importance. Previous health good. No previous illness so far as can be found except pneumonia eight years ago. Patient never drinks intoxicants and smokes cigarettes but seldom.

On July 13, 1919, in the morning he felt perfectly well. At 1 p. m. he started to play ball which made him perspire freely. At 2:30 p. m. he fainted and was immediately carried to St. Mary's Infirmary. Examination a few minutes later revealed a well-developed, well-nourished boy, in an almost totally unconscious condition. He was pale and very cyanotic. The hospital attendants believed him moribund. His whole body was covered with a cold sweat. Pulse very weak, 124 per minute, temperature 98.6°, respiration 24. Abdomen somewhat rigid and uniformly tender to the touch. When he regained consciousness he complained of diffuse abdominal pain.

Blood examination showed 5,600,000 reds, 14,800 whites. Hb. 105 per cent. (Dare). Color index .9. Differential count, poly's 90 per cent., mononuclears 10 per cent., eosinophiles 1 per cent. Blood of brownish color.

Patient was put to bed and given camphor and strychnia hypodermically. He became restless. At 4 p. m. he vomited a brownish liquid which was not examined. Patient was then given castor oil. At 11 p. m. bowels moved. The urine was passed at the same time and not examined. Temperature now 100°, pulse 104, better volume, respiration 28. At 10 a. m. next day patient's color almost normal. He still felt weak and remained in bed. No urine passed until next day, when it was normal. Blood pressure 110—60. Patient now gained strength gradually and left hospital in four days apparently well.

Having recently read of 17 cases of shoe dye poisoning, reported by Dr. Stifel, I suspected the same condition in my patient. Inquiry revealed the information that five and again three hours before becoming ill he had dyed his shoes while wearing them. The dye used was a very popular brand and the application was in accordance with the directions on the label. We secured the remnant of the dye. It had a strong pungent odor somewhat resembling bitter almonds. The city chemist found it to contain a large amount of nitrobenzol.

Toxicologists tell us that nitrobenzol is a yellow, oily fluid, with a pungent odor resembling bitter almonds. It is an intermediate product formed in the manufacture of anilin from benzene. It is also called essence of mirbane. Taken internally, 7 drops have caused death. It is also poisonous when inhaled or applied to the skin. It is used in the manufacture of explosives and anilin derivatives. Workmen who inhale too much of it, or spill it on themselves, are poisoned by it, death even at times resulting. The symptoms of poisoning come on several hours after the application of the poison to the skin and are favored by perspiration. They are cyanosis, anxiety, vomiting, formication, ringing in the ears, disturbed coordination, low blood pressure. The blood becomes a brownish color. In fatal cases there may be jaundice, convulsions and coma preceding death. The treatment recommended by Adams is, blood letting, artificial respiration, inhalation of oxygen, and stimulants, but no alcohol. The brown color of the blood is due to the formation of methemaglobin. From this compound the oxygen is less readily separated than from oxyhemaglobin. Thus no doubt the tissues are not well supplied with oxygen and symptoms of asphyxia supervene. Besides breaking down the red corpuscles, nitrobenzene paralyzes the nerve centers.

*Read at the Clinical Conference, St. Mary's Infirmary, St. Louis, June, 1920.

A review of current literature as to poisoning from the wearing of dyed shoes revealed many references to the fact that such cases do occur. However, I found but two articles which actually reported cases. Willard Stone in *The Journal of the American Medical Association* of October 1, 1904, reports a fatal case. A young man dyed the cloth uppers of his shoes black. He wore them to a ball where he danced and perspired freely. Some hours later he was stricken with cyanosis, vomiting, collapse, of which he died soon afterwards. In *The Journal of the American Medical Association* of February 8, 1919, Capt. Stifel cites 17 consecutive cases which occurred in an army camp in the course of four months. The symptoms were classical, but the diagnosis was not suspected until the seventeenth case. It was the reading of this article that enabled me to promptly diagnose my case. Since the occurrence of my case, G. Sanders reported a case in *The Journal of the American Medical Association* of May 29, 1920.

I report my case in order that other physicians may be enabled to diagnose cases which might otherwise go unrecognized, and to spread the knowledge that shoe dyes are sold broadcast which contain a powerful poison. The poison may be recognized by its peculiar odor, and danger from its use may be avoided if the shoes which have been dyed with it are not worn for four days thereafter. I communicated with our local health authorities about the matter. They said they would direct the manufacturers to print a caution on the label not to wear the shoes until four days after they had been dyed. Thus far it has not been done, for only a short time ago I saw exposed for sale a bottle of the same brand of shoe dye which had almost killed my patient. It had the same pungent odor and no caution as to its use was visible on the label.

The general public must therefore as heretofore rely for safety on good luck and the disagreeable odor which clings to the shoes recently dyed and usually prevents them from being worn for some days.

Shoe dye must not be confounded with shoe blacking or shoe polish. Dye is used only when we wish to dye tan or russet shoes black. This is usually done when we wish to get further use out of badly soiled tan or russet shoes.

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FRACTURE OF OS CALCIS WITH DISLOCATION OF ASTRAGALUS. REPORT OF CASES

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In considering fracture of the os calcis a few essential features must be recognized. First, this class of fracture, which in the past has generally been considered rare, can hardly be classed so since the advent of the extensive use of the roentgen-ray. The failure of recognition has been minimized to a great extent and many cases are now recognized early which in the past would have been overlooked from the standpoint of fracture, with consequently no attempt at correction being made. This fact is of greatest importance when we realize that over 50 per cent. of the os calcis fractures in the past have presented permanent disability.

In respect to recognized fractures of this class in recent years, it is appalling to review the indifferent attempts at proper reduction. Many cases received virtually no treatment but rest and a makeshift plaster mold. And still at the present day the actual fact of a fractured os calcis is not recognized in a large percentage of cases until a permanent disability is established in the form of pain at the point of the heel, the sole of the foot, with possibly the most usual site just under the external malleolus when function is attempted.

Much relief can be obtained in the late cases by proper padding and operative efforts in the way of chiseling the impinging fragments or callous. How much more important it would be had the patient received accurate diagnosis early with continued efforts of proper reduction.

This type of fracture usually follows a fall with the individual alighting squarely on the heel, the fracture resulting in various radiations and degrees. With very few exceptions, especially in the comminuted type, there is a spreading of the bones laterally. Thus in almost all the cases there will be an increased width of the foot or increase in its lateral dimensions; in addition there is an upper displacement of the posterior portion resulting in a relaxed and shortened appearance of the tendo Achilles. Where impaction occurs it is obvious, and such impaction should be freed and attempts made to mold fragments back into proper position.

The os calcis being the posterior pillar of the arch of the foot and being in direct line of weight bearing naturally, in such an accident, it receives the greatest degree of impact delivered directly through the astragalus. The later bone may participate in the fracture or dislocation. However, it is impossible to embrace all the various complicating bone in-

SUPPURATING MYOMA UTERI.—J. W. Nixon, San Antonio, Texas (*Journal A. M. A.*, Dec. 18, 1920), reports one case occurring among more than 1,200 operations for uterine fibroids at one hospital. This was the first instance of its kind encountered. A brief review is made of the literature.



Fig. 1.—Left foot before reduction.

juries of the arch of the foot, etc., in a short report of a case as here presented.

The chief point of interest in this case is seen in the print of the left foot, which shows a very unusual and rare type of complication in the form of complete dislocation of the astragalus at its scaphoid articulation. This patient fell ten feet, striking on a cement floor. The left foot presented comminuted fractures of the os calcis with dislocation of the astragalus; he suffered great pain, and in a few hours after the accident the soft tissues appeared swollen and ecchymosed almost to the knee. A comminuted fracture of the os calcis existed also in the right foot, extreme swelling and ec-

chymosis not being present. The dislocated astragalus of the left foot was reduced under anesthetic six hours after the injury, and gentle attempts at reduction of the both calcanea were made. On account of the condition and danger to the soft tissues very gentle efforts were pursued at first but as the soft tissues became rejuvenated, daily manipulations were pursued with more vigor, guided by accurate knowledge afforded by the roentgen-ray plates, two essential principles being borne in mind, viz., daily stretching of the Achilles and lateral pressure toward the center and replacement in mold which would tend to maintain the Achilles in extension. By such daily manipulation one avoids the unpleasant results which often follow the incision of the Achilles, the soft tissue while still in impaired condition will stand daily limited pressure manipulation. The all important danger of tissue gangrene must be constantly borne in mind.



Fig. 2.—Left foot after reduction.



Fig. 3.—Right foot before reduction.

Conclusion.—Fractures of the os calcis presenting limited degree of displacement, or with absent crepitation due to impaction, are easily overlooked and the true condition not realized until disclosed by walking efforts of the patient later on. Hence the importance of verifying or eliminating the existence of such a lesion in all cases of foot injury, especially those resulting from falls.

Its value anatomically in weight bearing, arch construction, and aid to muscular function, places it of extreme importance, and appeals for more intense scientific efforts at an early diagnosis and correct reduction.

In treatment the efforts must naturally vary



Fig. 4.—Right foot after reduction.

according to the condition of the soft tissue, complications extending to the other bones of the foot, etc. In this case for instance we might with safety have used the pad and mallet technique of Cotton as an early procedure on the right foot, but not so on the left because of the added danger to the existing trauma of soft tissue. But we were able to use gentle manipulation on the fragments daily after the reduction of the dislocated astragalus, with gradual improvement of the position of the fragments. The patient bore the full weight on the feet with slight discomfort at the end of six weeks.

1119 Rialto Bldg.

URINE IN SYPHILIS.—The urine was examined by Joseph Victor Klauder and John A. Kolmer, Philadelphia (*Journal A. M. A.*, Jan. 8, 1921), in forty-three cases of untreated primary syphilis, the dura-

tion of which was from a few days up to the time of cutaneous manifestations. Urinary abnormalities were present in three cases. The urine was examined in forty-six cases of untreated secondary syphilis. Urinary abnormalities were present in four cases. The positive cases all showed albumin and granular casts, excepting two in which casts were absent. In two cases, red blood cells were present. The albumin consisted of a trace, except that in two of the secondary cases a light cloud was present with many granular casts, and in one red blood cells. The urinary abnormalities disappeared after treatment with arsphenamin and mercury. The clear blood serum and the urine, from the same patient, were mixed for the presence of precipitin or precipitogens in serum or urine. The serums and urine of twenty acute untreated secondary cases were tested in this manner. The results were negative in all. Either the antibody is absent in the serum, or the antigen from the urine or both may be absent, as indicated by the results. The Wassermann reaction was performed with the urine of sixty patients with syphilis in the different stages of the disease, many presenting acute symptoms and being untreated. Every patient yielded a positive blood Wassermann reaction, the majority of reactions being strongly positive with three different antigens. Of the sixty cases, the urines in but two yielded positive reactions. There is no characteristic feature in the urine of paroxysmal hemoglobinuria of syphilitic origin which serves to differentiate it from the same condition due to other causes. Results with urinary tests for syphilis were of no value as a means to the diagnosis of syphilis.

PREVENTION OF DIABETES MELLITUS.—An analytical study of a considerable number of cases, as detailed in various life and mortality tables, leads Elliott P. Joslin, Boston (*Journal A. M. A.*, Jan. 8, 1921), to formulate this diabetic law: *It is rare for diabetes to develop in an individual above the age of 20 years who is habitually underweight, and when it does so develop the case will usually be found to be either extremely severe, extremely mild, or associated with a marked hereditary taint or degenerative stigmas.* The tendency to diabetes appears to be congenital. It is more intense in childhood, but, escaping that period, the individual is less and less likely to acquire the disease if he remains underweight, whereas in the obese the tendency finds a fertile soil. In the fat the predisposition may be no greater, but the external cause is more provocative. Diabetes occurs seventy-nine times more often in those more than 20 per cent. overweight than in those more than 20 per cent. underweight. Nervous excitement or nervous strain has also been considered a factor in the etiology of diabetes. It is notable, however, that soldiers returning from the front did not show sugar in the urine. The preponderant influence of obesity on the development of diabetes explains various peculiarities in diabetic case histories. In the presence of a wasting disease, diabetes is almost unknown. If the principle of low nutrition is effective in treatment, how much more will it be effective in prevention! And this the statistics of the 1,000 cases analyzed by Joslin prove. For the prevention of more than half of the cases of diabetes in this country, no radical undernutrition is necessary; the individual is simply asked to maintain the weight of his average fellowman.

BLACK SPIDER POISONING.—Four cases are cited by D. J. Louis, San Juan, Coahuila, Mexico (*Journal A. M. A.*, Jan. 8, 1921). The treatment consisted in applying gauze wet with a saturated solution of magnesium sulphate to the affected area, with internal administration of 4 minim doses of iodine.

THE JOURNAL

OF THE

Missouri State Medical Association

FEBRUARY, 1921.

EDITORIALS

BILLS IN THE LEGISLATURE

Members are warned that another attempt has been made to destroy the integrity of our medical practice act, in House Bill No. 288, introduced by Mr. Lay of Crawford County. This bill changes the present law concerning medical colleges from "reputable" colleges to "legally chartered" colleges, thus stripping the state board of health of all authority to standardize the equipment and teaching facilities of medical colleges. It would also compel the board of health to examine the graduates of any low grade medical school in the country. The bill furthermore omits some very important qualifications for premedical education. This bill is practically identical with the bill introduced at the 1919 session of the legislature which was finally defeated toward the close of the session.

The chiropractor bill, House Bill No. 113, has been introduced by Mr. Caulfield, of St. Louis City. They want "all the rights and privileges of physicians and surgeons" after an attendance of three years of six months each "or its equivalent" at some chiropractic school. You know how easy it is to get "the equivalent." A knowledge of the subjects in which they are supposed to be examined by a chiropractic board is inadequate for intelligent treatment of the sick. The bill is practically the same as those introduced in previous sessions. If this bill should pass it would impose upon the people another sect with all the rights and privileges of a medical graduate with the exception of prescribing drugs or performing surgical operations.

The optometry bill is H. B. 360 and was introduced by Mr. Manning of St. Louis just as we go to press—too late to obtain a copy of its provisions in time to publish in this issue of the JOURNAL.

Every member of the Association wants Missouri to maintain the high standard of medical requirements that are now in force, but in order to defeat these measures it is essential that all members take steps to inform their representative that House Bills No. 288 and No. 113 are vicious bills and ought to be defeated.

House Bill 160 requires physicians, mid-

wives and nurses to instill into the eyes of new-born children some prophylactic approved by the state board of health. The bill has the support of members of the board of health, the Missouri Association for the Blind and similar organizations. In the last session this bill was defeated because it specified that a solution of nitrate of silver should be used, a clause that invited the active opposition of physicians in the assembly. In its present form the bill should not be repugnant to physicians.

The program of the administration which contemplates placing the eleemosynary institutions and board of health under the control of a board of public welfare may hold sufficient promise of improvement in the management of these important state agencies affecting the public health to deserve the support of our Association, but the plans have not reached a point of definiteness to justify further comment.

A bill will probably be introduced to establish a bureau of sanitary engineering in the state board of health to enable the health department to examine drinking water in all parts of the state and assist county health officers in preventing the pollution of water supplies. This measure will of course have the indorsement of the medical profession.

THE LEGISLATIVE OUTLOOK

The 51st General Assembly presents aspects not dissimilar to the usual lawmaking bodies familiar to us except that many members of both houses are strangers to parliamentary usages and the complete reversal of political control in all departments. From the standpoint of the medical profession the surface indications of the present legislature hold no disturbing elements. In fact we believe there is a sufficient number of members in each house with breadth of view and intelligent conception of proper methods for health protection to prevent the passage of retrogressive measures and to support bills that will further safeguard the health of the people.

Several of our members were elected to represent their communities, Dr. B. B. Tout, Cass County, being Senator from the 17th District, composed of the counties of Cass, Johnson and Lafayette. In the House of Representatives we have the following physicians all of whom are members of our Association: Dr. G. M. Bristow, Mercer County; Dr. Wm. A. Porter, Lafayette County, and Dr. W. P. Rowland, Macon County. Dr. E. J. Malone represents Scott County and although not in active practice he keeps up his interest in maintaining high standards of medicine. All these gentlemen will co-operate with the Association in

our efforts to protect the welfare of the physician as well as the health interests of the people. We shall of course require the assistance of the county medical societies in opposing the well known attempts of the chiropractor and the optometrist to gain recognition as practitioners of medicine without having the minimum qualifications required by medical graduates, and we know from past experience that the county societies will lend the weight of their influence in all such matters.

TUBERCULOSIS BARRACKS AND VENEREAL CONTROL AT PENITENTIARY

The tuberculosis situation at the Missouri State Penitentiary has been exceedingly acute for the past year. There are one hundred and fifty cases of tuberculosis in all stages which have been examined, tabulated and classified. Until recently there was no way of isolating those afflicted with this disease and keep them out of the sleeping quarters of people who are not affected, but some months ago Governor Gardner found a way to provide sufficient funds to construct barracks in which those afflicted with tuberculosis could be housed and kept entirely away from those not infected. The building was opened for patients last December. It is constructed of wood and is steam heated with entire glass front to a veranda that opens into compartments in which the cots can be pushed at night. It will take care of the present active cases of tuberculosis and relieve the cell buildings of these people.

There seems to be much difference of opinion as to the advisability of paroling such patients on what is known as "sick parole." For some months the after history of those who were paroled was followed, as has been the custom in the past, and it was found that they nearly always went into surroundings which were anything but good for them and in which they were almost certain to infect other people. On account of this, it has been the policy of the present prison board not to parole these people, but to provide a place in which they can be taken care of better than they would be on the outside, which will protect innocent people from infection.

In April, 1920, the present prison board appropriated \$1,000 from the penitentiary funds and this was met by a like appropriation from the Chamberlain-Kahn Fund, which is under the direction of Dr. R. L. Russell as State Director of Venereal Diseases.

Wassermanns were made of every inmate of the prison whether there was a suspicion of venereal disease or not. The result was that over thirty per cent. of the men and nearly

forty-five per cent. of the women gave positive tests. Systematic treatment was inaugurated, and since that time there have been administered 3,164 doses of salvarsan, with 21,080 injections of mercury.

Every convict who enters the penitentiary at the present time has a Wassermann taken as a matter of routine, unless his physical symptoms make it unnecessary and even in those instances they are usually taken as a check. In all the state laboratory at Columbia has made during this period 3,324 Wassermann tests.

After a course of treatment that is considered ordinarily adequate for eradication of the disease, a blood test is again made and if found to be positive the treatment is renewed. Of those who have had the prescribed treatment and had control Wassermann taken sixty-six per cent. have come back as negative or cured. The result is that the Missouri State Penitentiary now shows no active syphilitic lesions among any of its prisoners except those who have arrived recently and in whom there has not been sufficient time to effect a cure.

ST. LOUIS CHAMBER OF COMMERCE VERSUS THE DANES

From the above caption one might hastily arrive at the conclusion that we are attempting to link the officials of the representative commercial body of St. Louis with the natives of Denmark whose world-renowned gullibility gave rise to the much quoted axiom, "Tell it to the Danes." Far from it; rather shall we felicitate this progressive body of St. Louisans on the good fortune which fell to their portion when they escaped by a very narrow margin the humiliation of listening to the blatant outpourings of a so-called doctor of psychology.

St. Louis has barely recovered from the boomerang reception accorded a certain Dr. Cook who, in terms of the polariscope, was found to be levorotatory, when along comes a self-styled "Dr." O. E. Miller, imbued with the firm conviction that if St. Louisans "fell" once they could by logical ratio be counted upon to do so again. It seems that the Chamber of Commerce committee "slipped" for awhile, but eventually regained their balance, thanks to the vigilance of the American Medical Association whose book "Nostrums and Quackery" exposed Miller's hectic career in pseudo-medical ventures here and abroad.

We are tempted to dwell for an instant on the strange phase of human nature which renders men otherwise alert so readily susceptible to the wiles of medical fakers and hypocrites, the only requirement seemingly essential on

the part of the offender being a suave personality and an ability to titillate the victim's center of vanity in order to arouse the necessary confidence to work the game. The advent of this impostor in the City of St. Louis serves to project in a glaring manner the prejudicial attitude which uninformed laymen usually assume toward the efforts of the American Medical Association and the Missouri State Medical Association to rid our community of such parasites. We have spent large sums of money and utilized countless periods of time of the most valuable professional sort to spread broadcast the necessary propaganda for counteracting the lure of the medical faker. The sparsely decorated drug store shelf of today as contrasted with the garish wrappers on patent medicines in the past, the ostracized quack advertisements in the newspaper of today, and a public fairly well educated to be wary about their dealings in such matters are a few of the tangible accomplishments which may be accredited to medical organization.

That the battle has not by any means been an easy one may be quickly seen by perusing the pamphlets issued by the American Medical Association, such as "Nostrums and Quackery," "Cancer Cure Frauds," "Consumption Cures," "Female Weakness Cures," etc. The fraudulent medical canker has at various periods of our country's history assumed such gigantic proportions and manifested itself under such variegated and protean aspects, that the fight against it has necessitated what may have appeared to some lay minds as arbitrary measures. The shekels of the quack have been utilized promiscuously to thwart the cause of justice and it has therefore required the most talented legal minds concomitantly with the efforts of the American Medical Association to loosen the grip of the quack. The records of many bitterly contested lawsuits bear evidence that the federal attorneys have had to utilize all the resources of medicine, law and chemistry to overcome the clutch of the medical grafter. A great deal of credit is justly due to the splendid spirit which has been evinced by some of the prominent newspapers and periodicals of the country who have banished the quack and his "con talk" from their columns.

It is rather difficult to surmise how the Miller episode developed in a city having the scope of St. Louis with its vast avenues for eliciting all necessary information concerning an individual or scheme suggesting even a slight doubt of integrity. This becomes even more recondite when we pause to consider that there is established in St. Louis the headquarters of the Missouri State Medical Association, one of the component units of the Amer-

ican Medical Association, the secretary of which is willing at all times to offer information and assistance to civic and state bodies where such help will prevent the imposition of medical frauds upon the public. A little diligence on the part of the Chamber of Commerce committee would have evoked the necessary information relative to "Dr." Miller and his scheme and have obviated a situation poignantly embarrassing to them. Let us hope that this incident will have impressed itself in a sufficiently definite manner upon the minds of those who are apt to be placed in a similar category so that hereafter all such engagements involving the fair name of medicine will be arranged not through some devious or specious method of personal calculation, but rather through a business like investigation involving if necessary a telephone call or a visit to the proper source for essential information concerning the reputability of the prospective guest—the headquarters of the Missouri State Medical Association.

JAZZ MEDICAL PAPERS

Those of us who have watched the various literary styles with interest as they have been evidenced in our best literature from year to year have noted radical changes at times and again changes of so slight a degree that the most acute critic was not aware of them. But when the change is of a decided nature, when even the dullest reader receives a jolt, when the pain received is not only disturbing but causes an unmistakable degree of anguish, it must be admitted at once that a style of writing which brings about so great an upset in the reader is a style which should arrest our attention long enough to receive our severest reprimands. And if it is an indisputable fact that already in our ephemeral literature to a great extent, and to a slighter extent in our books of a more permanent nature, the staccato literary method is pursued—the method of unfinished sentences, of verbs omitted, of a general emasculation so that the rounding out is completely lacking—is the time far distant when the medical article will likewise undergo a change, and instead of what today is a full, though at times a somewhat ungrammatical, sentence there will appear in print, no doubt to be applauded, the syncopated concoction which today is known as jazz music and jazz literature and jazz pictures painted by jazz artists?

There are already indications, perhaps few and far between but real indications, that medical papers are drifting toward the popular idea of what constitutes easy reading today and what constitutes an approach to the majority of minds who necessarily disdain anything that smacks of mid-Victorian times or

even of a later period. To syncopate means to leave out. Thus music that has undergone this torturous operation is no longer music as generally accepted, lulling the senses with its rhythm, but a noisy affair—in fact, the louder the noise the better the jazz. In the same way, when sentences are exposed to the white heat of syncopation, only a jumble, a disordered conglomeration of words remain, creating noise and but little sense. Similar effects are reached in the province of painting by like methods. To be more explicit so that the medical reader will no longer be humbugged by the jazz medical article which he will read every now and then, this undermining of a healthy sentence or, where the medical writer is audacious, this undermining of many sentences, is not done so openly as in music, but in an insidious manner—with a fine Italian hand, so to speak.

Let us cite a few jazz sentences from some medical articles we have recently read and thus convey to the reader the full meaning of our plea to heed our words of wisdom: "Of the sixty consecutive cases of influenza that I treated I am happy to state the results were gratifying—no deaths." . . . "My new technic for the surgical treatment of the chronic maxillary antrum has been absolutely satisfactory in fourteen such cases"—and just one more quotation which contains so many of the "good" qualities of jazz that the reader must be most obdurate not to be able to recognize them at once: "What's the sensible quality of a cow's breath? Exquisitely sweet! Her defecation? Expurgatory, solvent, anywhere, time or place. Not octan, quartan or even quotidian. Any cathartics? Yes, water in her food, and barrels q. s. additional. By-products? Finest in the world. A horse's breath? Ditto bos. Take pills? No. Laxatives? Yes, hydraulic, with cow sense to know how much. Headaches? They say not. Most humans' breath? Exquisitely peccable. Many humans are walking silos, portable larders without reservations. Do they eat? Sundries, sextuple! Drink? The males used to. Anything to prevent boiler explosion? No, it often happens."

With the above citations in mind—and here it would be well to state that they were taken from medical journals with an enviable circulation—is it at all surprising that we are a bit nervous as to the future of the medical article? Are these not harbingers of what might come, not in negligible quantities, but in shoals? If jazz is dinned into the doctor's ears by what he hears in the way of music and by what he reads in popular magazines and by close propinquity with those who "talk" jazz, and he necessarily feels that to be sonorous in conversation is indicative of being stale

and out of date, it is but natural that when he sits himself down to write for a medical journal he will jazz his article. He is human, perhaps too human; but this is a virtue except when being too human destroys one's judgment. Imitation is not indicative of weakness, as is generally supposed, nor can it be completely obliterated by exercising mental strength. It comes to all of us in an insidious manner: a small voice at first which is rarely heeded. Hence we would inveigh against the slightest tendency, no matter how alluring, to fall into the way of the jazz makers of words and sentences on the part of the medical men who write. Better indeed the deplorable loosenesses in the matter of grammar, so characteristic even of some articles by men who should know better, than the jazz brand with its syncopation that spells nothing but a noisy endeavor to attract attention by a "pathological" arrangement of words and sentences.

DR. JONES RESIGNS AS SECRETARY OF STATE BOARD OF HEALTH

Dr. George H. Jones, for the past four years secretary of the state board of health, has resigned and will sever his connection with the state health activities after February 1. He has been identified with the state health department for eight years, serving as state bacteriologist for four years previous to his appointment as secretary in 1917, when the laboratory and bacteriological work was transferred to the state university. On November 20, 1919, he was appointed state health commissioner.

When Dr. Jones took charge of the executive work of the board of health it was scarcely possible to do anything in reconstructive health work because of the meager authority given to the health department and its restricted financial appropriations. Two years ago the legislature enlarged the scope of the board's powers, the bills being drawn under the supervision of Dr. Jones and their passage secured through his efforts and the co-operation of volunteer organizations and public spirited citizens. Even then the appropriations were not sufficient to enable the board to inaugurate comprehensive plans for health protection, but with the aid of federal appropriations and the active interest of the officers of the United States Public Health Service new divisions were created and put into operation so that now the health work embraces bureaus on preventable diseases, child hygiene, venereal diseases, public health nursing and sanitary engineering. The wisdom of such subdivision of the state health department activities has been so strongly impressed

upon the people that it is most unlikely the advances made during the past two years will be permitted to lapse into the former inactive condition. In fact, the appropriations for the next two years will probably be larger than the amount ever allowed the board in the past.

Dr. Jones has demonstrated what can be done in behalf of public health when the department is supported by statutory and financial props. It is largely as a result of his intelligent administration of the laws and of the board regulations that the past two years have seen such splendid achievements in health work. Dr. Jones will continue in public health work after leaving the service of the state having been appointed director of the department of public health service for the Southwestern Division of the American Red Cross with headquarters at St. Louis.

DOCTORS AND SPECIALISTS

There is no denying the present day tendency of the embryonic M.D. to delve into some specialty of medical science soon after graduation; in fact, it is becoming quite the vogue, and since many discrepancies are arising concomitantly with this fashion it behooves us to take a glance at the situation and determine if possible whether this custom in modern medicine is not assuming the proportions of other illogical outcroppings which, when once fairly established, sail along with an impetus that habit and tradition alone can impart. American psychology has proven a very startling process of reasoning for the European brain to analyze, therefore our attention is arrested now and then by the comment of some noted European physician who expresses his wonderment at the reckless and haphazard manner in which "specialists" are turned out in America. We recall that in our own country there were registered occasional feeble protests against the "six weeks' specialist," but even these have ceased to be voiced.

Surely we are losing sight of the salient function which medicine as a profession is called upon to perform by virtue of its peculiar relation to mankind when we tolerate without substantial protest this increasing tendency on the part of the graduate in medicine. We suspect that the medical school of today with its arbitrary curriculum is responsible in some measure for this mania, for the courses are so arranged that after the student reaches the end of the fourth year he is filled with despair as to the possibility of mastering the essentials of all the studies that have been presented to him often in a cumbersome manner and laden by the scholastic phantom

of research. The most logical procedure then—and the bewildered graduate imagines it to be the most plausible, albeit not the most heroic—is to escape the chaotic responsibility of practicing general medicine, and therefore the impetuous rush into a specialty.

Medicine must ever hold before its disciples the pragmatic end results and benefits which should logically accrue to the community—in this instance, the patients. This assumption should obtain precedence over all other considerations which concern the physician personally or the profession as a whole. As we apprehend the situation, the European physician—notably of England—is imbued first of all with the paramount necessity of acquiring first and above all other considerations a fundamental and substantial knowledge of general medicine. There are many physicians in France, Germany and England who are consulted mainly for some particular phase of medicine, and who could by all processes of reasoning be justly termed specialists, yet we venture to suggest that it would prove to be the exception rather than the rule to find many physicians in those countries who would dub themselves with the much desired American cognomen of specialist.

The fact has evidently not been lost sight of in Europe that the primary requisite of any medical man is to become a doctor in the broadest sense of all that the term implies. Yes! a doctor first and then if it is unavoidable a specialist, but under no circumstances should the conditions be reversed. It is difficult to surmise how any medical man can ever hope to become a competent diagnostician as a specialist unless he possesses a sound knowledge of general medicine. The mal results of such misconception are too evident to need pointing out, and the errors which are constantly being made by the narrowed and "one-eyed" specialist require no further comment. The graduate in medicine on leaving the medical school or hospital has already obtained a glimmering of the seething economic cauldron awaiting him on the outside, and he has absorbed the wild rumors of the "princely fees" which are received by specialists; his decision is soon made, and presto! he is a specialist, or at least firmly imbued with that assumption.

Were we commenting upon the dearth of physicians in the country districts we should point out that the underlying incentive for this exodus from the country was due to the lure of the possibilities presumably present in the path of the city specialist. Too often this potentiality eventuates as a mere mirage and when the illusions have been dispelled the sensible physician will return to the surer conditions in the rural communities.

PAPERS REQUESTED FOR PROGRAM OF ANNUAL MEETING

The program committee of the annual meeting of the Association invites the members to send titles of papers they desire to read at the St. Joseph session as soon as possible. It requires considerable time to prepare the program in a manner to suit the occasion and therefore a knowledge of the subjects to be discussed is very important information for the committee's guidance. The committee is especially anxious to receive titles from members outside the borders of the two large cities so that the program will present contributions from many sections of the state. St. Joseph always attracts a large attendance and the program committee is earnestly working to make the scientific sessions as attractive and as instructive as possible.

THE WESTERN SURGICAL ASSOCIATION

The Western Surgical Association held its thirtieth annual meeting in southern California on December 3 and 4, 1920, under the presidency of Dr. Arthur T. Mann of Minneapolis. The opening sessions and banquet took place in the Alexandria Hotel, Los Angeles, while the meetings of the second day were held at the Valley Hunt Club in Pasadena. The attendance was rather smaller than usual owing to the great distance that most of the members had to travel in order to attend, but it was one of the best meetings that the Association has ever had.

Dr. McLean of Winnipeg gave a most logical and exhaustive paper on kidney stone. The essayist disapproved of the practice of removing the kidney unless the stone was located.

Dr. A. Mozingo of Minneapolis contributed a very valuable paper on the treatment of empyema by the closed method. His work while in the army attracted national attention because of the excellent results he had obtained, the mortality in 100 cases averaging only 4 per cent.

Dr. Arnold Swetzer of St. Paul made a most excellent contribution on the surgery of the anterior mediastinum.

Dr. William E. Leighton of St. Louis reported his results in four cases in which he had resected the posterior roots of the spinal cord for the pains of locomotor ataxia.

Three new members were elected from Missouri, Dr. Hyland Wallace of St. Joseph, Dr. Harvey McKay and Dr. Everett Graham of St. Louis. The new officers elected for the ensuing year were Dr. Charles D. Lockwood of Pasadena, president; Dr. Herman E. Pearse

of Kansas City, first vice president; Dr. Harry P. Ritchie of St. Paul, second vice president; Dr. Warren A. Dennis of Minneapolis, secretary and treasurer; Dr. William T. Coughlin and Dr. Roland Hill of St. Louis, members of the executive committee.

It was decided to hold the 1921 meeting in St. Louis and Dr. William E. Leighton of St. Louis was appointed chairman of the committee on arrangements.

BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind
and strengthens the mental grasp*

ON reading Sir James Mackenzie's book, "The Future of Medicine" (Oxford University Press, New York), one is at once struck with the fact of the superiority of the writing medical man in England over his counterpart in our own country. True, we have some medical men who write well, but generally when this is the case they are so meticulous in the proper use of words that the outcome is emasculated to an exasperating degree. We have in mind some of the Boston medical men—men who have lived in a literary atmosphere and who have had the advantage of a Harvard degree. They have not been indifferent to literary form and have succeeded within a narrow sphere in expressing themselves in a manner that invites only the friendliest criticism and the kindest comments. But they allow themselves to be hampered; they are not unafraid of English which should be as traditional with us as it is with Englishmen; they are loath to come out in the sunshine and express themselves with vigor, with courage, *sans peur et sans reproche*. Hence we get from this source—about the best in our country at present—a wan and slender product, robbed of the manliness of sturdy English and all the best strengths of a language which is superior to all others in expressing satire and sarcasm, thereby exposing the fripperies of a vacuous mind, or as Lowell puts it—"the theory of idlers and dilettanti, of fribbles in morals and declaimers in verse." In short, though born democrats they fain would be aristocrats when they write, hence their failure "to get across" with their products.

Sir James Mackenzie, on the other hand, is the ideal writer of English that is natural and the ideal expositor of truths about those tendencies in the science of medicine today which should hold our attention for praise and for dispraise. Very illuminating indeed are all the chapters in this book, and most corroborative of what we have expressed rather cowardly behind closed doors and only in the presence

of friends whom we knew would not betray us to the outside public, or in our written words with apologies for being too forward. But, unlike us, this author is not the sort of man who is Janus-faced; he is too honest for this. And on account of his honesty and also on account of a mentality that is not fearful of the right of the individual to exercise the democratic privilege of calling a spade a spade, he says things which are full truths and shuns half-truths. Especially is his clarity evidenced and also his straightforward manner, when dealing with "mechanical medicine"—the laboratory. While giving due praise to what the laboratory workers are doing today, he sees the clinician as he should be—the man who was wont to sit for minutes, sometimes for hours, at the bedside of the patient, studying symptoms and signs of disease—becoming more and more dependent "on what the laboratory says" and less dependent on his own acumen, his own intelligence, his own perspicacity. And he rightly deplores this change.—not in one short phrase which might indicate a deep-dyed prejudice against the laboratory, but in many phrases which indicate that he has studied this "dire" situation in modern medicine in the most unbiased manner and has arrived at his just conclusions only after envisaging the subject from every angle. These thoughts of the author are merely mentioned to give the reader some idea of this arresting book and some idea of the attitude of a penetrating mind which stamps its untrammelled "individuality" on every subject discussed—be it "The Student, the Teacher and the Examiner," "The Influence of Tradition on Teaching," "Scientific Education," "Research in Medicine," or "The Opportunities of the General Practitioner."

P. S.

"ITALIA, mother of the souls of men," sang Swinburne years ago, and even today though we have grown more materialistic we cannot but voice the exquisite lines of the English poet. In a word, we cannot get away from Italy past and present in our careers, be they intensely artistic or only mildly so. Her influences are far-reaching, and no matter how bold and obstinate our front, no matter how obdurate we may be to the reception of thoughts other than those of a utilitarian nature, her influences get under our skin, now tremendously, now mildly. And in the instance of Dr. Joseph Collins in his recently published book, "Idling in Italy" (Charles Scribner's Sons, New York), we have a case in point—an excellent illustration of how Italy influenced a psychiatrist as only Italy can: a psychiatrist of the new school of neurologic

thought, that is, saturated with the theories of psychology and the eternal sex question through its manifold and intricate snarls. And the influences were for the good of the author—were a help to a larger vision, to a greater catholicity of thought, to a widening of the mental horizon, and the ready reception of ideas without let or hindrance so that the dyed-in-the-wool New Yorker was metamorphosed into the broadminded critic devoid of prejudice.

Although the title of Dr. Collins' book is "Idling in Italy" there was—inferring from the contents of the book—no idling on the part of the author but a close and rather intense study of the people, their literature and their art as they are today. And this study must have been of the unremitting sort, otherwise the excellences of the book would be lacking. What these excellences are every intelligent reader will detect at once, but in a review they should be mentioned lest, even though the reader be of the intelligent class, for some reason they might escape him. Here crowded into some 300 pages—the last essay has nothing to do with Italy but is a unique pen picture of President Wilson, and the same remark applies to the essays, "Fictional Biography and Autobiography" and "The Literary Mausoleum of Samuel Butler"—modern Italy is unfolded: the Futurist writers, some of the "degenerate" writers, some of the writers who have a reputation untinted with degeneracy, the temper of the "common" people, striking religious and social customs. And the food spread on the table by Dr. Collins and which he so generously offers the public is of the tempting sort, and is garnished with bits of clever observation and bits of penetrative understandingness far removed from the mental habit of the idler. Thus the author happily gives us a rather complete picture of the main currents of Italian literature as it is today and of society inclusive not only of the artists in words but of the inferior artists in everyday life, who are never considered artistic by the elect but who nevertheless have really more to do with the shaping of the thought of the people at large than have those of recognized fame.

Aside from the subjects, which are indeed varied, Dr. Collins' literary style is excellent, though at times he falls into the grievous mistake of using complicated words of the medical or near-medical sort when simple words would answer the purpose. For instance, the reiteration of "egocentric" and "somatic" jars on the reader, and especially must these words jar on the sensibilities of those readers who are not inured to medical terms. The essay, "Gabriele D'Annunzio—Poet, Pilot, and Pirate," is of great value and so is the essay

on "The Futurist School of Writers." "Saints and Sinners" is a bit unfair in its attitude toward a subject of too many ramifications to be intelligently disposed of in a few pages. It is the only essay in the book that has the sort of writing that is put forward with the idea of appealing "to the gallery."

P. S.

THE continuation of American literature—if it is a continuation—from those far off days when Hawthorne and Thoreau wrote exquisite English and Emerson philosophized and Motley and Prescott entranced us with their histories is exemplified in the "O. Henry Memorial Volume of Prize Stories for 1919," issued in 1920, and published by Doubleday, Page and Company, Garden City and New York. In this volume are included what was considered best in the matter of short stories during 1919 by the committee of award, so that a fitting memorial could be offered to the memory of that modern short story magician, O. Henry. After reading these stories the connecting link between the authors mentioned above and the authors whose "best" is in the volume before us, is lacking, and not only lacking, but the abyss between them is so wide and so deep that no one would have the hardihood to bridge the tremendous gap. But this does not mean that the short stories are not clever, are not in some instances quite out of the ordinary, are not of a nature to invite a modicum of enthusiastic praise. Because they are clever is at times a point against them, for their cleverness indicates on the part of the author an intense desire to shine with such effulgence that the artistic mistakes of the story will be overlooked. The one exception to the charge of too much cleverness is the first story, "England to America," by Margaret Prescott Montague, which first saw the light of day in that most excellent and dependable journal, *Atlantic Monthly*. But even in this instance, which is a complete and one might say a violent suppression of the sin of our recognized and much overpraised writers, the absence of cleverness is not completely covered by that something which, according to the canons of the art of short story writing, must obtain if heights are to be reached. In short, the story is thin. Nevertheless, despite demerits—glaring in some instances and almost negligible in other instances—this volume is to be commended on account of its variety and also on account of refreshing points of view. But what with its severance from the methods and manner of the "old masters" and its strenuous efforts to be unusual, even "smart" in the sense of the small child who wants to show off, it illustrates the

faults of a literature that is deprived of the rich background of tradition.

P. S.

NEWS NOTES

DR. WM. H. MOOK of St. Louis was severely injured January 1 when his machine collided with another machine that carried no lights.

DR. PAUL C. SCHNOEBELEN of St. Louis announces that he has opened offices in the Humboldt Building and will limit his practice to internal medicine and diagnosis.

DR. LOREN R. WEIR formerly of Pattonsburg has gone to New York where he will remain a year or two doing special work in diseases of the eye, ear, nose and throat.

DR. E. E. EVANS of Fulton, for several years assistant physician at State Hospital No. 1, Fulton, has taken charge of the East Louisiana State Hospital for the Insane, located at Jackson, La.

DR. EPHRAIM D. HATCHER until recently connected with the medical corps of the Commonwealth Steel Company, Granite City, Illinois, has been appointed assistant physician at State Hospital No. 3, Nevada, Mo.

THE annual congress on medical education, licensure, hospitals and public health of the American Medical Association and the Federation of State Medical Boards will be held at the Congress Hotel, Chicago, March 7, 8, 9 and 10.

IN our last issue we announced erroneously that Dr. F. C. E. Kuhlmann, formerly of St. Louis, had accepted a commission in the Medical Corps of the Regular Army. Dr. Kuhlmann holds a commission in the United States Public Health Service.

DR. R. E. CASTELAW, superintendent of Wesley Hospital, Kansas City, has relinquished that position and accepted the position of superintendent of the Christian Church Hospital in Kansas City.

BURGLARS gained entrance into the home of Dr. M. G. Seelig of St. Louis on January 7, but contented themselves with carrying away the contents of the ice chest holding the provisions for the Sunday dinner.

DR. E. R. MENG of St. Louis suffered internal injuries January 8 when his automobile became unmanageable and ran into the curb. His wife was also injured by flying glass from the broken windshield.

THE Audrain County Medical Society has been tendered the use of the sun parlor in the new County Hospital for holding its monthly meetings. The spirit of co-operation is very evident between the board of directors of the hospital and the physicians in the county.

DRS. HANGEN and WESTERMAN of St. Louis announce the dissolution of their partnership in private practice and in conducting the Downtown Emergency Hospital. Dr. Hangen will in future have sole charge of the hospital at its present location, 901 Arcade Building.

THE federal government has taken charge of Wesley Hospital at Kansas City and will conduct it as a hospital for the care and treatment of wounded soldiers under the direction of the United States Public Health Service.

THE custom of sending certificates of membership was discontinued with the beginning of 1921 because it was found that very few members preserved the certificates and also because the pocket card is a receipt for state dues and evidence of the right to enjoy all the privileges of membership. If a certificate is desired it will be sent on request.

THE first meeting of the Missouri Section, Clinical Congress of American College of Surgeons, will be held at St. Louis, March 10 and 11. The scientific meetings and hospital conference will be held in the afternoons at the Hotel Statler, and a dinner and public meeting will be held in the evening of Thursday, March 10, at the same place. All physicians are invited to attend these sessions.

THE fifth annual session of the American Congress on Internal Medicine will be held at Baltimore, February 21-26. The activities of the Congress will be largely clinical. Ward-walks, laboratory demonstrations and group or amphitheatre clinics will be conducted daily by members of the medical faculties of the Johns Hopkins and the Maryland Universities. Further information may be secured by addressing the Secretary-General, 1002 N. Dearborn St., Chicago, Ill.

STATE HOSPITAL No. 1 of Fulton, of which Dr. M. O. Biggs is superintendent, closed the biennial period ending December 31, 1920, with a balance of the appropriation for its maintenance unused, and State Hospital No. 4 at Farmington, of which Dr. J. L. Eaton is superintendent, also had a comfortable balance in its appropriation that will revert to the general revenue fund of the state. Notwithstanding the high prices of material and supplies, these two hospitals passed through the biennial period without a deficit.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Calco Chemical Co.: Salicaine.

Coleman Laboratories: Bacillus Bulgaricus.

E. R. Squibb and Sons: Procaine, H. T. Procaine, Solution Tablets Procaine.

Winthrop Chemical Co.: Adalin Tablets, 5 grains; Veronal Tablets, 5 grains; Novaspirin Tablets, 5 grains.

Lederle Antitoxin Laboratories: Typhoid Glycerol-Vaccine, Typhoid Combined Glycerol-Vaccine, Pertussis Glycerol-Vaccine, Pneumococcus Glycerol-Vaccine.

The Beebe Laboratories: Pneumococcus Vaccine No. 14, Typhoid-Paratyphoid Vaccine No. 39, Colon Vaccine (Acne) No. 11, Acne (Mixed) Vaccine No. 10.

Nonproprietary Articles: Phenetsal, Saligenin.

THE second annual meeting of the Central Section of the American Roentgen Ray Society will be held on February 21, at St. Louis, in the Hotel Statler. The scientific program will begin at 9:00 a. m., and continue throughout the day, being followed by a banquet and lantern slide exhibition in the evening. Drs. George Dock, St. Louis; W. H. Stewart, New York; P. N. Hickey, Detroit; W. A. Evans, Detroit; J. T. Case, Battle Creek; J. M. Martin, Dallas; E. H. Skinner, Kansas City, and F. E. Weatherby, New York, will contribute to the scientific program. Dr. James G. Van Zwaluwenburg of Ann Arbor is president of the society and Dr. Edwin C. Ernst, Humboldt Building, St. Louis, is chairman of the local committee, to whom requests for further information relative to arrangements for the meeting may be made. Physicians interested in roentgenology are invited to attend.

ON January 13, a group of twenty-one men and women met at the University Club, St.

Louis, to organize the Missouri Society for Mental Hygiene. The bench and bar, the clergy, medicine, social service, education, industry and public service were represented. A constitution and by-laws were adopted, officers were elected and committees selected. The aims of the society were stated to be: To work for the conservation of mental health; to help prevent nervous and mental disorders and mental defect; to help raise the standards of care and treatment for those suffering from any of these disorders or defects; to secure and disseminate reliable information on these subjects and also on mental factors involved in problems related to industry, education, crime, prostitution, dependency and the like; to aid in the solution of problems resulting from the war; to co-operate with federal, state and local agencies or officials and with private and public agencies whose work is in any way related to that of a Society for Mental Hygiene. The secretary, Dr. J. E. McFadden, 304 Humboldt Bldg., St. Louis, will be glad to answer all in quires and receive applications for membership. The annual dues were fixed at two dollars.

THE following announcement holds special interest for many of our members and we are authorized to make the invitation known so that every friend of Dr. McAlester shall have an opportunity of attending the banquet:

"Among the happy events of our young year is the fact that on New Year's Day our good friend, Dr. A. W. McAlester, Prince of Optimists, and practical idealist, reached the *Eightieth Mile Post* on life's journey, in good health and mental vigor, and is still practicing his specialty of dispensing the milk of human kindness to all within his reach.

"An appropriate commemoration of the eightieth anniversary of his birth would have been arranged by the Boone County Medical Society to take place on the proper date, January the first, if the spirit of youthfulness in this octogenarian had not hidden the facts concerning his age and birthday from his fellow members. But the secret is out, and at a recent meeting of the Society the expressions were unanimous that a Birthday Banquet should still be given to this oldest and most worthy member of the Society. Committees were therefore appointed, and arrangements have been made to give the banquet on Tuesday, February 15, at 6:00 p. m. at the Boone Tavern in Columbia.

"Many of the non-medical citizens, long time friends of Dr. McAlester, have justly claimed the right to join in this expression of high regard for a splendid neighbor and friend, and our Society gladly welcomes the co-operation and attendance of such friends, both men and women.

"The members of our Society realize that the venerable guest of the evening is not merely a local celebrity, but that on account of his career as a teacher of medicine, and as dean of the medical department of the State University for many years, and as a wise counselor on the state board of health under several state administrations, his influence for good has reached all parts of the state, and has extended to distant parts beyond its borders, and we feel that all of his former students and active as-

sociates who are in the land of the living would regard it as an affront if they were not given an opportunity to join in the felicitations of this occasion. This is your invitation. Come and gladden the heart of your old friend by your presence and words of congratulation.

"To cover the cost of the banquet and incidental expenses, the committee on ways and means have put the price at \$2.50 per plate. Please write the secretary at once whether you can attend and send him a check for the number of banquet tickets you wish reserved for yourself and others who will come with you. Address Dr. J. E. Jordan, Columbia, Mo."

MEMBERSHIP CHANGES, JANUARY

NEW MEMBERS

Arendale, A. Lillian, 5990 Easton Ave., St. Louis.

Atchley, R. O., Lebanon.

Baumgartner, Edward A., Humboldt Bldg., St. Louis.

Bingham, Junius W., West Plains.

Brown, James M., 2858a Union Blvd., St. Louis.

Calloway, G. D., 212½ McDaniel Ave., Springfield.

Casey, E. B. M., Frisco Hosp., Springfield.

Cummings, James H., Metropolitan Bldg., St. Louis.

Davis, Robert C., 400 Portsmouth Bldg., Kansas City.

Day, Anthony B., Humboldt Bldg., St. Louis.

Egbert, T. H., Kennett.

Finley, Byron E., 204 N. 18th St., St. Louis.

Flader, Otto F., 4004 Chouteau Ave., St. Louis.

Freedman, Joseph H., N. W. Cor. 12th and Brooklyn Ave., Kansas City.

Fry, Walter F., 15 S. Vandeventer Ave., St. Louis.

Hartley, L. D., Nebo.

Hazelwood, Varney, Webb City.

Hudson, David O., Montgomery City.

Humpert, Geo. A., 4376 Lee Ave., St. Louis.

Jolly, John L., Marshfield.

Kavanaugh, J. W., New Hampton.

Kehrer, J. K. W., Boonville.

Kieffer, Roland S., 402 Lister Bldg., St. Louis.

Klippel, Edward T., 617 Chouteau Ave., St. Louis.

Lonsberry, R. C., Woodruff Bldg., Springfield.

Maples, F. M., Frisco Hosp., Springfield.

Meador, H. L., Van Buren.

Miller, R. H., Clarksburg.

Morrison, Harriott T., Lutheran Hosp., St. Louis.

Owen, Leonard J., 3427 Washington Ave., St. Louis.

Rohlfing, Edwin H., 3547 Wyoming St., St. Louis.

Schaller, Francis T., 2242 Indiana Ave., St. Louis.
 See, S. D., Eagleville.
 Stadler, Stephen A., 3101 Main St., Kansas City.
 Thompson, Nathan P., 3108 Cass Ave., St. Louis.
 Treasure, B. R., Bethany.
 Vander Wyst, P. G. H., Stanberry.
 Van Ravenswaay, Alex, Boonville.
 Walthers, R. A., Overland.
 Welsh, John E., Marshfield.
 Winningham, Jesse, Blythedale.

CHANGES OF ADDRESS

Castelaw, Rush E., Wesley Hsp., to Christian Church Hosp., Kansas City.
 Craven, J. H., Carl Junction to 617 W. 19th St., Joplin.
 Fredericks, Edw. L., 445 Belle Fountain Ave. to 417 Prospect Blvd., Kansas City.
 Green, Bernard L., Humboldt Bldg., St. Louis, to 25 School St., Annapolis, Md.
 Griffith, D. R., Creighton, to Bates City.
 Hecker, Chas. H., Camp Funston, Kans., to 1501 St. Louis Ave., St. Louis.
 Hein, Emil E., Grand and Arsenal St., to 3837 Utah Pl., St. Louis.
 Ludwick, A. L., Kansas City, Mo., to Overland Park, Kans.
 McRaven, Cyrus P., Old Appleton, to Jamestown.
 Moore, C. A., Aurora, to 318 College St., Springfield.
 Pelz, Mort D., New York City, to 5889 Enright Ave., St. Louis.
 Rendleman, Geo. F., Anna, Ill., to 3rd Nat'l Bank Bldg., St. Louis.
 Robertson, John T., Cabool, Mo., to Jamestown, N. Dak.
 Scott, John N., Kansas City Mo., to Peabody, Kans.
 Schlicht, Wm. F., Nevada, to Niangua.
 Shroat, Loren G., Seattle, Wash., to Big Sandy, Mont.
 Slucumb, L. H., St. Louis, Mo., to Ft. Smith, Ark.
 Smith, Oda O., Frisco Hosp., St. Louis, to Taylor and Washington.
 Threadgill, Jesse M., 5769 Westminster, St. Louis, to University Club Bldg.
 Thym, H. H., 522 Altman Bldg., to 2947 Flora Ave., Kansas City.

NO LONGER MEMBERS IN GOOD STANDING

Hamilton, Howard A., Drynob, Mo.
 Heuston, H. H., Boulder, Colo.
 Holt, A. T., Greenville, Tenn.
 Holt, J. B., Greenville, Tenn.
 Lucas, H. R., Portland, Ore.
 Lewis, Ned. O., Kansas City, Mo.

Leslie, James F., Bernice, Okla.
 Lyle, C. F., Hume, Mo.
 Ratliff, Harry L., Dallas, Tex.
 Roberts, Carson S., St. Joseph, Mo.
 Ryan, Lawrence A., E. St. Louis, Ill.
 Scholz, S. B., Jr., Springfield, Mass.
 Schwald, N. A., Kileen, Tex.
 Tillmanns, C. S. J., Calxico, Calif.
 Weitz, Geo. J., Belleville, Ill.
 Williams, L. R., St. Louis, Mo.
 Yeagle, R. P., Santa Ana, Calif.
 Zillman, A. W., Keytesville, Mo.

DECEASED

Barnes, Algernon S., Jr., St. Louis.
 Elmore, J. A., Osage City, Kans.
 Robinson, Anselm C., St. Louis.
 Houwink, J. J., St. Louis.
 Miller, Gregory S., St. Louis.
 Muller, Carl J., St. Louis.

OBITUARY

GEORGE O. COFFIN, M.D.

Dr. George O. Coffin, an honorary member of the Jackson County Medical Society, died at the Bonner Springs Sanitarium, Kansas City, Kan., December 11, 1920, of cerebral hemorrhage and was buried at Forest Hill Cemetery on December 13.

Dr. Coffin was born in Pennsylvania August 4, 1858, and graduated from the Medico-Chirurgical College of Philadelphia in 1878. He located at Frankfort, Kansas, in 1879 where he practiced medicine until 1885 when he came to Kansas City and established an office on Union Avenue. He graduated from the Kansas City Medical College in 1892.

He was house physician at the General Hospital in the year 1893 and City Physician from 1894 to 1902. He became a member of this Society in 1896. He was one of the founders of the Medico-Chirurgical College of Kansas City and was its first president; afterwards was dean of the faculty until the merger of that school into the medical department of the Kansas University.

In 1904 he sustained a wound infection of the hand which was the beginning of ill health. In 1906 he had his first apoplectic stroke, the second in 1908 and the final one two days before his death.

To those who knew him best he had qualities of mind and heart which attracted lasting friendships.

JOKSHAN FREYMAN,
 C. LESTER HALL,
 Committee on Necrology.

Bulletin Jackson County Med. Society.

CORRESPONDENCE

DISTRIBUTION OF ANTIRABIC VACCINE

WASHINGTON, December 9, 1920.

To the Editor:

1. The distribution of antirabic vaccine which has been carried on by the Public Health Service through the Hygienic Laboratory will be discontinued, effective January 1, 1921.

2. This service was instituted in 1908 and has been furnished continuously since that time. It has been a source of gratification to the Public Health Service to have been of assistance to state health organizations in this respect. It is now found necessary to discontinue the service, owing to limitations of personnel and space.

3. The requests for rabies vaccine will be honored up to and including January 1, 1921, and vaccine for completing all treatments begun under such requests will be supplied.

4. The vaccine may be purchased from the following establishments, now holding license issued by the Secretary of the Treasury:

Parke, Davis & Co., Detroit, Mich.

The Cutter Laboratory, Berkeley, California.

Lederle Antitoxin Laboratories, Pearl River, New York.

Eli Lilly & Company, Indianapolis, Indiana.

H. K. Mulford Company, Philadelphia, Pennsylvania.

Bureau of Laboratories, Department of Health, New York City.

E. R. Squibb & Sons, New Brunswick, New Jersey.

Gilliland Laboratories, Ambler, Pennsylvania.

Dr. W. T. McDougall, Kansas City, Missouri.

Laboratory of Clinical Pathology, Kansas City, Missouri.

St. Louis Pasteur Institute, St. Louis, Missouri.

Dr. James McI. Phillips, Columbus, Ohio.

Dr. D. L. Harris Laboratories, St. Louis, Missouri.

H. S. CUMMING,
Surgeon General.

ST. LOUIS, January 10, 1921.

HARDINESS OF LUCILIA CAESAR

To the Editor:

I have just read the paper by Dr. E. W. Saunders, "The *Lucilia Caesar* Epizootic," to be published in the *Journal of the Missouri State Medical Association*. In this paper he quotes from a paper by Dutcher and myself covering a study of "Limberneck in Poultry."

One of the conclusions to the paper on limberneck states that limberneck is undoubtedly a symptom rather than a disease. Personally I consider limberneck a disease and in future publications would so state. On page 658 of our paper mention is made of the finding of "*Lucilia Caesar*" at University Farm, St. Paul, in December, 1919. On December 10 the thermometer read 10; December 13, —12; December 15, —14; December 16, —4; December 17, —2, and December 18, +2. The observation was made on December 18. These facts further emphasize the hardness of this insect. Some larvae sent to me by Dr. Wisdom in August, 1920, were macerated in water, filtered through a Berkefeld filter and the filtrate tested on guinea pigs. The unheated filtrate was very toxic. At 37° and 45° C. (98.6 and 113° F.) the toxin was still very toxic to pigs. At

55° C. (131° F.) and 60° C. (140° F.) the toxin did not cause paralysis or death when administered to pigs. These animals were kept for eight days after being fed this material. The temperature, 131° F., is somewhat lower than Dr. Saunders states is the temperature at which the toxin is destroyed.

I sincerely hope some organization will carry on the work started by Dr. Saunders—such work must be productive of much good.

Yours very truly,

S. D. WILKINS,
Research Chemist.

MISCELLANY

PROFESSIONAL INCOME

How the Federal Tax Applies to the Man of the Professions

To the professional man the problem of correctly making out an income tax return for the year 1920 is somewhat more involved than that presented to the salaried man. The wage earner on a fixed salary has an accurate estimate of the amount of compensation received for personal services while the professional man's income varies from year to year. In the professional class may be included the physician, dentist, lawyer, architect, veterinary and author and clergyman. Each must figure up his net income for the last year. If single or if married and not living with his wife and his net income was \$1,000 or more, or if married and living with his wife and his net income was \$2,000 or more, a return must be filed.

The exemptions are the same as for the year 1919, \$1,000 for single persons and \$2,000 for married persons living with husband or wife, and heads of families, plus \$200 for each person dependent upon the taxpayer, if such persons are under 18 years of age, or incapable of self-support because mentally or physically defective. The period for filing returns is from January 1 to March 15, 1921.

The professional man must make a return of all fees, salaries and other compensation for services rendered, together with income from all other sources. If he keeps his accounts on the "receipts and disbursement" basis—which means a record of the amount received and the amount paid for expenses—he should file his income tax return for the year 1920 on that basis. If he keeps books showing income accrued and expenses incurred during the year, he must make his return from his books and include all income, even though not entered on his books. If books are kept on the accrual basis the taxpayer must include all income that accrued, even though not actually received, and may deduct items of expense, although not actually paid. Both the receipts and disbursement basis and the accrual basis are explained in instructions on the forms for filing individual returns of income.

This constitutes gross income from which the taxpayer is allowed certain deductions in arriving at net income upon which the tax is assessed. Among such deductions are the cost of supplies used by him in the practice of his profession, expenses paid in the operation and repair of an automobile used exclusively in making professional calls, dues to professional societies and subscriptions to professional journals, rent paid for office room, expense of fuel, light, water, telephone used in his office, and the hire of office assistants. Amounts expended for books, furniture and professional instruments and

equipment of a permanent character are not allowable deductions. In the case of a professional man who maintains an office, but incidentally receives at his home patients, clients, or other callers in connection with his professional work, no part of the rent of the home is deductible. If, however, he uses part of the house for his office such portion of the rent as is properly attributable to such office is a deductible item.

A reasonable allowance is made for depreciation, or wear and tear of equipment and instruments used by professional men. When, through some new invention or radical change in methods or similar circumstances, the usefulness in his profession of some or all of his instruments or other equipment is suddenly terminated, so that he discards such asset permanently from use, he may claim as a loss for that year the difference between the cost (reduced by reasonable adjustment for wear and tear it has undergone) and its junk or salvage value. If the apparatus was owned prior to March 1, 1913—the date the first income tax law became effective—its fair market value at that date should be considered instead of its cost in figuring depreciation and obsolescence.

Deductions for uncollectible fees form an important item in the returns of many professional men. To be allowed as a deduction, a debt must be worthless and must have been charged off within the year in which its worthlessness was discovered. The return must show evidence of the manner in which discovery was made. For example, statement should be made that the debtor has been discharged from bankruptcy or has disappeared leaving no trace, or that all ordinary means of collections have been exhausted.

A debt proved to be worthless is not always a proper deduction. Unpaid amounts representing fees for professional services are not allowed as deductions unless included as income in the return for the year in which the deduction is sought or in a previous year. The fact that expected income was not received does not reduce the taxable income. If a debt is forgiven it cannot be deducted, because it is then regarded as a gift. A debt may not be charged off or deducted in part, but must be wholly worthless before any part can be deducted.

Compensation in any form for professional services must be included as income. If a physician, lawyer, or other professional man should receive from a merchant goods in payment for professional services, the fair market value of such goods must be included as net income.

Forms for filing returns are now available at offices of collectors of internal revenue and branch offices. Collectors will mail to each person who last year filed a return a copy of the return form for 1920. Failure to receive a form, however, does not relieve a taxpayer of his obligation to file a return and pay the tax on time. Taxpayers whose net income for the year 1920 was \$5,000 or less should use Form 1040A. Those whose net income was in excess of \$5,000 should use Form 1040.

In addition to the individual forms, partnerships must file a return of income, or even if there was no net income, on Form 1065. Partnerships as such are not subject to the income tax. Individuals carrying on business in partnerships, however, are taxable upon their distributive shares of the net income of such partnerships whether distributed or not and are required to include such shares in their individual returns. The return must show the name and address of each partner and his share of net income.

The tax this year as last may be paid in full at the time of filing the return—on or before March 15, 1921—or in four equal installments, due on or before March 15, June 15, September 15, and December 15.

Payment may be made by cash, money order or check, which should be made payable to "Collector of Internal Revenue." The return must be filed with the collector for the district in which the taxpayer lives or has his principal place of business. Heavy penalties are provided by the revenue act for failure to file a return and pay the tax within the time prescribed by law.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-First Meeting, October 18, 1920

1. EXHIBITION OF CASES.

A. DEMONSTRATION OF A CASE OF GENERAL EPILEPSY DUE TO BRAIN TUMOR.—By DR. ERNEST SACHS.

I am showing this case because of certain unusual features. This patient had been treated for fifteen years for general epilepsy. She had no symptoms of increased intracranial pressure. Eye grounds were normal and her convulsions were general in character. About six weeks before admission she began to complain of headache. At that time her physical examination was still negative. Roentgen-ray plate showed the shadow of a large tumor in the posterior portion of her frontal lobe on her left side. Though there were no focal symptoms and nothing else to guide us, a craniotomy was done and a tumor (which was shown) measuring $7\frac{1}{2} \times 6 \times 4$ cm. was removed. It was an endothelioma. Since the removal of the tumor the patient has been relieved of headaches and has had no convulsions. The case among other things emphasizes the importance of taking routine roentgen-ray pictures in all epileptics even though a tumor shadow may be found very occasionally.

B. TWO CASES OF MEDIASTINAL TUMORS, PROBABLY ANEURYSMS.—By DR. GEO. R. HERRMANN.

(a) W. H. T. Male, 65. Pain in lower right chest. Shortness of breath. Difficulty in swallowing solids. Loss of weight.

Chest crushed at six. Gonorrhea at thirty-five. Chancre at thirty. Wife had two miscarriages.

Pain in right chest first noticed seven years ago while at work; disappeared after reclining for two hours. Another similar attack came on eight months later. Attacks were irregular until two years ago when after influenza he began to have constant, steady aching pain in the chest. Shortness of breath, cough and sputum have also been present, with hemoptysis on one occasion two months ago. He has lost 40 pounds in weight during the last six months.

Tall, emaciated man. Fairly marked arteriosclerosis. Large, firm gland in right axilla and another above right clavicle. Chest shows bulging with slight pulsation over right and mid-front. Systolic and marked diastolic shock over this area and tenderness. P. N. dull 10.5 cm. out to right in III to V Ics. 3 cm. to right and 12.5 cm. to left in VI Ics. Heart sounds muffled but heard over right. No murmurs. Distended veins over right side.

Electrocardiograms: Occasional right ventricular extrasystoles. No preponderance. Seven foot plate of chest. M. R., 5 cm. M. L., 7.5 cm. L., 15.5 cm. A. 9, at fourth rib right 12 cm., and left 3 cm.

Fluoroscopic examination by Dr. Sherwood Moore showed slight encroachment on the posterior mediastinum. The shadow showed no pulsation and ascended on inspiration. Roentgen-ray appearance indicated it to be cystic. Surrounding lung tissue clear, uninvolved. Roentgen-ray diagnosis: cyst of mediastinum.

Wassermann four plus, laboratory examinations otherwise negative. In the differential diagnoses were considered: 1, aneurysm of the ascending arch of the aorta; 2, tumor of the mediastinum, as lymphosarcoma, Hodgkin's disease, dermoid cyst, malignancy of lung.

Dr. Graham has seen this case and can discuss the surgical aspects. Along with this case Dr. Dock thought it would be of interest to make brief mention of a somewhat similar case that we had last year, and to demonstrate the unusual specimen.

(b) N. R. Male. Age, 54. Entered hospital June 26, 1918, discharged July 20, 1918.

Shortness of breath. Three or four drinks of whisky per day. Typhoid and gonorrhea at fifteen. Chancre at twenty-five followed by orchitis. Attacks of shortness of breath for fifteen years.

Insidious in onset. Dyspnea and wheezing first noticed when reclining; relieved by rising. No palpitation or pain. Increase in symptoms dated from attack of "rheumatism" in February, 1918. Attacks consisted of dyspnea and wheezing accompanied by cyanosis of lips and fingers. He had vertigo on one occasion. Pain in epigastrium with radiation down in abdomen at times. Edema of feet for one week.

Physical Examination.—Marked dyspnea, conspicuous cyanosis of lips and fingers. Cheyne-Stokes respiration. Edema of feet and legs. Rales at both lung bases. Heart markedly enlarged 17 cm. to left. R. B. D. thought obscured by liver. Chest plate showed enlargement to right and left. Rate rapid, rhythm slightly irregular. Harsh, loud systolic at the apex transmitted to the axilla. Heart sounds accentuated, P_2 greater than A_2 (?). Pulse deficit. Liver 8 cm. below costal margin. Superficial veins of chest and abdomen were engorged. Kidney function slightly impaired. N. P. N. 78, P. S. P. 50 per cent. to 60 per cent.

Electrocardiograms showed auricular flutter; right sided ventricular preponderance. Digitalis, 10 c.c., changed rhythm to auricular fibrillation.

Diagnosis, C. C. V. D. Mitral stenosis and insufficiency. Arteriosclerosis, chronic nephritis.

Second admission, March 6, 1920. Patient had been working since discharge two years previously. Four days before admission did very heavy lifting and as a result he became very dyspneic and his heart had palpitated severely since that time.

Heart rate regular at times at 140, slightly irregular at times; pulse deficit of 30. Blood pressure, 114-100.

Seven-foot plate showed the enlarged heart M. R. 11 cm., M. L. 12.5 cm., L. 22.5 cm., A. 7 cm. Fluoroscopic examination showed no pulsation of the large shadow to the right as shown in the seven-foot plate.

Electrocardiograms showed auricular flutter; rate, auricular 256, ventricular 128. A massive dose of 20 c.c. digitalis produced auricular fibrillation which persisted.

Wassermann repeatedly negative. In the differential diagnoses were considered: 1, aneurysm of aorta or heart; 2, tumor of the heart; distended right auricle (tricuspid stenosis).

Patient found dead in bed two weeks later.

At partial autopsy the heart was removed and the bulging to the right was found to be a tumor mass containing pulaceous matter that microscopically showed cholesterol crystals. It was then considered a cholesteatoma or dermoid cyst attached to the right auricle.

Dr. M. T. Burrows has studied this specimen very carefully and will report the findings.

DISCUSSION

Dr. Burrows: The tumor is a large ovoid shaped mass adherent to the auricle. It is directly connected with the base of a deep aneurysmal-like sinus of Valsalva by a slender pedicle of tissue. This tissue has a consistency like that of the aorta. The main tumor mass measures 12x9 cm. The pedicle is tubular in form, but contains no definite lumen. It is four cm. in length and its cross diameter is five mm. The pouch in the sinus of Valsalva is one cm. across at its mouth and about 1 cm. deep. It is cone shaped, but no opening is found into the tumor pedicle, which comes from the bottom of it.

The tumor has a smooth tough outer wall of fibrous tissue, which is divided roughly into two layers. The outer layer in the gross has the appearance of muscle. The inner layer is composed without of a gray opaque tissue, within of a clear gelatinous tissue streaked and mottled with gray and yellowish opaque material. The whole of the interior of the tumor is filled with a greasy and gelatinous material which contains many glistening crystals.

Microscopically the tumor is composed of a dense fibrous wall. The outer portion of this wall contains fibroblasts and many small and medium sized mononuclear cells. There are also a few polyblasts and plasma cells. The cells are scattered between fibres and clustered in many places. The inner portion of the wall is a mass of hyaline fibrous tissue almost devoid of nuclei. In this there are many blue staining hyaline areas. These two layers are not sharply demarcated, but there is a gradual transition of the tissue between the two. The inner layer is directly continuous with the interior of the tumor, which is filled with necrotic material outlining open, oval, circular, spindle-shaped, and rhomboid-shaped spaces where fat and crystals have been dissolved out. The picture is that of a progressive degeneration from without inward.

A smear from the interior of the tumor shows large numbers of rhombic plates with notched corners.

The tumor taken as a whole has not the appearance of a dermoid as one might think it to be from the gross description but rather that of a massive atheromata.

Sections from the pedicle have not been made. Sections of the aorta and the wall of the aneurysm in the sinus of Valsalva show chronic inflammatory changes. The heart is large. The hypertrophy is greatest on the left side.

A complete search of the literature has not as yet been made and at present it is not possible to state positively the true nature of the tumor. It is evidently one which has sprung from the aorta at the base of an aneurysm pouch in one of the sinuses of Valsalva.

Dr. Dock: The first patient illustrates a common difficulty in the diagnosis of aneurysm, namely, from the absence of expansile pulsation, either by physical signs or fluoroscopically. If a pulsation is distinctly expansile it speaks for aneurysm, but many aneurysms have so little pulsation at times that it cannot be made out. In this case there seems to be no question that this is an aneurysm, but whether there is anything else is a difficult question. On account of the advance in the surgery of the thorax I think all such cases should be examined by surgeons with special training in thoracic diseases and have them pass opinion on the condition.

Dr. Graham: It seems to me one of the first things to do is to get the patient's consent to surgical interference. Fortunately, in this case there has been no difficulty in this regard. The patient threatens suicide unless something is done to relieve his condition. It seems to me the best way to proceed is to withhold any idea of surgical interference until after a course of antisyphilitic treatment. If the mass has not diminished in the meantime, to go on, prepared, if we find an aneurysm, to do nothing more than to pass ten or twelve feet of wire into the aneurysm and to pass through it an electric current. So far as I know, nothing has been a permanent cure, but a great many of these thoracic aneurysms have been relieved of pain for several years. I have had personal experience in three cases in which relief of pain for more than a year has been obtained by this method of treatment. Previous to that time the patients had complained greatly of pain.

C. A CASE OF ADDISON'S DISEASE.—

By DR. JAMES A. EVANS.

Weakness, loss of weight, cough. Family history negative.

Typhoid age three. Hair has never grown since. Malaria, chills and fever, past ten years, attacks lasting twenty-six days. Dusky tint to skin past nine years. Chancre at twenty-three.

Duration of present condition four months. Asthma, shortness of breath, cough, loss of 35 lbs. in three months. Nocturia once or twice.

Emaciated. Almost total absence of hair. Deep brown pigment over whole body, most marked in exposed areas, axilla and genitals. Lips pigmented, small spots of bluish to brownish pigmentation on buccal mucosa. Skin hot, dry, elastic. Teeth carious; gums show pyorrhea. General adenopathy. Tongue purplish color due to deeply pigmented papillae along margin. Bronzed and pigmented gums.

Left supraclavicular space sunken. P. N. markedly impaired at right apex.

P. S. at right apex very faint with intensified W. and V. S.

P. N. markedly impaired over right back above mid-scapular region with bronchial B. S. Fine crackling rales over upper right lobe.

P. N. slightly impaired over left apex front and rear with prolonged expiration and fine rales.

B. S. somewhat depressed and fine crackling rales over right base.

Urine showed cloud of albumen on entrance which disappeared in three weeks, to appear twice again in a. v. s. t. Only one examination showed casts. Slight fixation of sp. gr. Night urine not increased over day urine. P. S. P. 75 per cent. on entrance; 55 per cent. a month later.

Blood shows slight secondary anemia. Stools, few tbc. bacilli. Sputum, large amount of elastic tissue and tbc. bacilli. Wassermann 4 plus in cholesterin antigen. Negative non-cholesterin.

Electrocardiogram normal. Repeated Goetch adrenalin tests show no reaction to as high a dose as

30 c.c. 1/1000 solution intramuscularly. Basal metabolism normal, but patient is running afternoon temperature. Roentgen-ray, seven foot, chest normal. Ht. measurements. Stereo of chest confirms diagnosis of pulmonary tuberculosis. Plate of left suprarenal region taken after thorough catharsis shows shadow in left suprarenal region. Question of calcification.

Course in hospital. Put in fresh air on porch. Regular diet. Tonic. Absolute rest in bed. Adrenalin 1:1000 $\frac{1}{2}$ c.c. twice daily. Weight has increased $4\frac{1}{2}$ lbs. Blood pressure has gone up from 110 S. on entrance to 120 S. Lung signs essentially same as on entrance. Pigmentation has increased slightly if any change.

D. A CASE OF LEAD POISONING.—By DR. JAMES A. EVANS.

Nausea, vomiting and abdominal cramps. Family history and past history negative.

Occupation, mixes powdered lead to make the plates for storage batteries. Gets lead powder over hands and breathes the dust. Has worked at this for the past four months.

Began four weeks ago with cramps in abdomen, vomiting green material. Noticed dark line around base of teeth at this time. Pain in back of left leg at that time. He quit work at this time and was in bed for two weeks, his symptoms gradually abating. Company physician told him trouble was due to the effect of the acid he worked with and not to the lead. Returned to work again three days ago and worked only five hours when he was again seized with cramps and vomiting which have increased in severity. Constipated.

On entrance showed widely dilated pupils which do not contract to more than 3 mm. Blue line at bases of two teeth in upper jaw and four in lower jaw. Teeth carious; gums; pyorrhea. Tonsils cryptic, buried, exudative. Temporal arteries thickened and tortuous. Radials and brachials normal. Blood pressure 132/100. Abdomen, slight rigidity of recti with slight tenderness in umbilical region. Gurgling felt in L. R. 2, and peristaltic sounds, marked on auscultation. Tenderness over left sciatic nerve (which has now disappeared, 14 hrs. after entrance).

Laboratory findings: Blood—no stippling; slight achromia and poikilocytosis; r. b. c. and w. b. c. normal.

Urine, sp. gr. 1024. Albumin, slight trace. Not enough is passed as yet to make test for Pb. Many w. b. c. No casts. P. S. P. 40 per cent.

Vomit watery, green color, no food. Stools negative.

Course in hospital. Two doses of benzyl benzoate 15 m. each, three hours apart failed to relieve cramps. Atropin, gr. 1/50, also failed one hour later. One and one-half hours after atropin was given morphia gr. $\frac{1}{4}$, and atropin gr. 1/100, produced relief and patient slept fitfully during rest of night.

Given oz. iii, 50 per cent. $MgSO_4$ on entrance and has had several good watery movements during day. K. I, gr. V, t. i. d. theory being to form Pb. I. to be excreted as such.

DISCUSSION

Dr. Dock: This is an important case. There are few diseases better understood than lead poisoning. There is a law requiring registration of all lead poisoning and yet every time we get such a patient we find that no attention was paid to the law and we find great difficulty in finding officials who know anything about it. In this case, according to the pa-

tient, an effort was made to convince patient he did not have lead poisoning. This illustrates the unsatisfactory condition of the laws regarding industrial disease and the practical carrying out of such laws.

2. THE FIFTH CONGRESS OF THE INTERNATIONAL SOCIETY OF SURGERY.—By DR. EVARTS A. GRAHAM.

3. MID-LINE CONGENITAL CERVICAL FISTULAE OF TRACHEAL ORIGIN.—By DR. M. G. SEELIG.

Up to about 1880 all centrally placed congenital fistulae of the neck were supposed to be due either invariably, or in a large proportion of cases, to tracheal participation. In 1895 His described the thyroglossal duct in detail and showed that central congenital fistulae of the neck were always due to maldevelopment of this duct. As a result of His' studies, it is an accepted doctrine today that mid-line fistulae of congenital origin are never referable to tracheal maldevelopment.

A case history was presented with operative and pathological findings that seemed to demonstrate beyond doubt that in this single instance at least a mid-line fistulae was due to tracheal maldevelopment. Sections from the excised tissue gave an almost perfect histological picture of the trachea.

DISCUSSION

Dr. Burrows: It was a great pleasure to me to have the opportunity to examine the tissue from the specimen described by Dr. Seelig. There is nothing to add, but I might say that this tissue is not like that of a thyroglossal duct, but resembled in every way the tissue peculiar to the larynx and trachea.

4. NEURITIS OF THE CRANIAL NERVES IN ENCEPHALITIS LETHARGICA.—By DR. MONTROSE T. BURROWS

Aside from studies of the brain and spinal cord in encephalitis lethargica, little work has been done on the pathology of this disease. The pathological changes in the brain and spinal cord of this disease aside from their distribution are similar to those of infantile paralysis or acute poliomyelitis. A clear cut method of differentiating pathologically between these two diseases has not been established.

The material for this study has consisted of fifty complete autopsies on cases dead of acute poliomyelitis and two complete and one partial autopsy on cases dead of encephalitis lethargica. The general lymphoid hyperplasia so common to acute poliomyelitis was not found in the case of encephalitis lethargica. The sensory ganglia are involved in many cases of acute poliomyelitis. No neuritis was observed by us in any of the cases. Neuritis of the cranial nerves was found in each of the three cases of encephalitis lethargica. The three cases represented two types of this disease. One belongs to that type showing a general polyneuropathy, while the other two showed chiefly cranial nerve and cerebral symptoms. Lethargy was present in each of them.

Neuritis of the cranial nerves has not been noted before in these cases. Its presence is interesting not only because cranial nerve neuritis is a rare condition, but also in that it gives a pathological basis of union between the cases of epidemic polyneuropathy with those of true epidemic encephalitis and helps in differentiating this disease pathologically from acute poliomyelitis.

DISCUSSION

Dr. Schwab: In case No. 1 there is no mention of neuritis of the peripheral nerve and no clinical evidence of neuritis. In case No. 2, a case which I had the opportunity of studying with great care, there was clinical evidence of a multiple neuritis. In fact, admission diagnosis was either encephalitis or a toxic multiple neuritis. In this case there was distinct pain along the course of the peripheral nerve with loss of deep reflexes and definitely proven disturbances of the sensory pattern suggestive of a lesion of the peripheral nerve. In the cases of poliomyelitis according to the literature there are very few of them which contain any study of the peripheral nerves, microscopic or otherwise, therefore it is impossible it seems to me to differentiate poliomyelitis from encephalitis by reason of the evidence of neuritic changes in the one and not in the other.

Dr. Burrows (closing): I have examined many nerves from many cases of infantile paralysis. There is inflammation in many of the spinal ganglia, but no neuritis has ever been seen. It might be stated here, however, that the meningeal changes in infantile paralysis interested us during the study of the pathology of these cases. In a large number of cases mononuclear cells were seen in the subarachnoid spaces without any evident hyperplasia of the endothelium lining these spaces. In other cases there were endothelial changes like those in the perivascular spaces. It became of interest to see whether such endothelial hyperplasia in the meninges were associated with meningeal symptoms. Unfortunately the clinical histories were not sufficiently complete in the cases to complete the study. It is a question that may be of interest in the further study of the pathology of infantile paralysis.

FIFTEENTH DISTRICT POSTGRADUATE MEETING

The Fifteenth Councilor District, composed of Johnson and Cass Counties, enjoyed a postgraduate meeting at the State Teachers College at Warrensburg, December 16, 1920. The physicians from the adjoining counties of Lafayette, Henry and Pettis, were invited to attend. A rousing good time was the result of the meeting and much enthusiasm was aroused by the splendid program rendered by the participants.

The meeting was called to order at 1:30 p. m. by Dr. L. J. Schofield, Councilor for the district, and the program rendered was as follows:

Cancer of the Breast, by Dr. Jabez N. Jackson, Kansas City.

Diagnosis of Spinal Cord Diseases, by Dr. A. L. Skoog, Kansas City.

Thyroid Disease, by Dr. P. T. Bohan, Kansas City.

Empyema, by Dr. Wm. E. Montgomery, Kansas City.

At 8 p. m. Dr. R. L. Russell of Jefferson City gave an illustrated lecture on the "Prevention of Venereal Diseases." Many students of the college attended this lecture and much interest was created among the students in behalf of a clean life personally and disseminating this valuable knowledge among the people.

Medical men from other counties were interested in the work and probably before long requests for postgraduate meetings will come in from adjoining communities.

O. B. HALL, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

At the regular meeting of the Henry County Medical Society held in Clinton, Mo., Wednesday, December 1, 1920, the following officers were elected for the year 1921: President, Dr. Joseph G. Beaty, Huntingdale; Vice President, Dr. Edwin C. Peelor, Clinton; Secretary-Treasurer, Dr. F. M. Douglass, Clinton (re-elected); Delegate and Alternate, Drs. N. I. Stebbins and W. R. Campbell, respectively, hold over.

F. M. DOUGLASS, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

The first meeting of the year was called to order by the President, J. F. Binnie. The minutes of the last regular meeting were read and approved.

The president read the memorial to the members whom death had called during the year, the members rising in respect to their memory.

Reports for 1920 were read and accepted from the editorial staff of *The Bulletin*, Medical Milk Commission, committees on Building, Program, Pediatrics, Anesthesia, Medical Education, Radiology, Medical School Inspection, Surgery, Genito-Urinary, Public Health.

Dr. Neff read the report of the special building committee which was accepted and the committee discharged.

Dr. Lowe, chairman of the board of censors, gave a verbal report of the work of that board, which was accepted.

Dr. Pearce, chairman of the Committee on Hospital Standardization and Allied Interests, read a report containing suggestive resolutions and recommendations for the coming year. This report was accepted and referred to the Council for favorable consideration and action.

Dr. Hanna, chairman of the Committee on Obstetrics, read a report of the progress in obstetrics during 1920. This report was accepted, complimented and ordered published in *Bulletin*.

The reports of the treasurer and secretary were accepted and ordered printed in *The Bulletin*.

The Necrology Committee read the report of the death of Dr. George O. Coffin, which was accepted.

The president-elect, G. E. Bellows, was escorted to the chair and called upon the retiring president, who reviewed the work of the Society for the year.

The vice president, F. C. Neff, took the chair and the president read the report of the appointed committees for 1921.

Attendance 45.

PAUL V. WOOLLEY, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

Jasper County Medical Society held its first meeting in 1921 on January 4 at the Joplin Public Library. The new officers, Dr. S. A. Grantham, president; Dr. W. A. Gentry, vice president; Dr. Jas I. Tyree, secretary; Dr. M. C. Shelton, treasurer, were installed. Dr. Grantham presided.

It was voted to hold all future meetings in the new Joplin Y. M. C. A. Building. A resolution commending Dr. W. B. Harutun, Health Commissioner of Joplin, for his admirable campaign in attempting to make Joplin's milk pure, was adopted.

Dr. E. D. James presented a case of myositis ossificans progressiva. The patient dated his present trouble back to two and a half years ago when he had what he described as felons on the ends of seven

fingers. He had some sort of serum treatment at that time and shortly afterwards ossification in his arms and legs started in. Later the muscles of his trunk became involved. His joints now are more or less ankylosed, muscles extremely hard, hands deformed, especially distal ends of fingers. There is some slight cardiac hypertrophy with a presystolic murmur, and excessive hyperhidrosis. Two Wassermanns were negative, and roentgen-ray of abdominal contents showed a large extended cecum. No specific history.

In the discussion Dr. Coombs suggested some sort of trophic disturbance, Dr. S. H. Miller said he would like to go into the possibility of syphilis more thoroughly, Dr. Neff suggested focal infection, and Dr. Tyree mentioned a trophic disturbance brought about by disorder of one of the glands of internal secretion. The case was of extreme interest owing to the fact that there are only about a hundred similar cases previously reported.

Dr. Harutun reviewed the campaign he has been making in Joplin for pure milk.

The following members were present: Drs. Grantham, Snyder, Coombs, Gray, Powers, Miller, Johnson, Clark, Dickerson, J. A. Chenoweth, Shelton, Korn, Barson, Harutun, E. D. James, Neff, Stormont, Balsley, Tyree.

JAS. I. TYREE, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

A regular meeting of the Jasper County Medical Society was held at Joplin Y. M. C. A., January 11, 1921, the president, Dr. S. A. Grantham, in the chair.

Those present were Drs. Grantham, Lauder milk, E. D. James, Simms, Powers, Pifer, L. C. Chenoweth, Korn, Gregg, Harutun, Mallory, Snyder, J. A. Chenoweth, Barson, Shelton, Amos, R. M. James, Cummings, Williams, Leaming, Coombs, Gray, Balsley, Neff, Dickerson, Stormont, Gentry, Clinton and Tyree.

Dr. S. A. Grantham presented a case of perinephritic abscess.

Dr. Simms presented a case of early hyperthyroidism; patient was complaining from pain around the heart only.

Dr. J. A. Chenoweth reviewed the work of the Joplin Venereal Clinic and received the Society's indorsement for his work there.

MEETING OF JANUARY 18, 1921

Jasper County Medical Society held its third meeting of 1921, January 18, at the Joplin Y. M. C. A. Present were Drs. Williams, E. D. James, Powers, R. M. James, Neff, Thornton, S. H. Miller, Coombs, Balsley, L. C. Chenoweth, Johnson, Snyder, Barson, Morgan, Korn, Mack, Shelton, Dickerson, Leaming, Grantham, B. A. Clark and Tyree, of Joplin; Drs. Clinton, Ketcham and Webster, of Carthage; Dr. Alberty, of Carl Junction; Dr. Stormont, of Carterville; Dr. Lauder milk, of Galena; visitor, Dr. McKinney, of Galena.

A very interesting paper was read by Dr. Lloyd B. Clinton on lymphatic leukemia in children. The paper was discussed by Drs. Williams, Barson, Coombs, Powers and Tyree.

Dr. C. M. Balsley read an important paper on the examination of the rectum; discussed by Drs. Dickerson, L. C. Chenoweth and Ketcham.

A committee was appointed to draw up resolutions expressing the sympathy of the Society for the death of H. H. Ball, D.D.S., one of Joplin's pioneer dentists. Dr. Ball died January 18, 1921.

Dr. Ketcham's candidacy for appointment to the Missouri State Board of Health was indorsed by the Society. Dr. Varney Hazelwood of Webb City, Superintendent Jasper County Tuberculosis Hospital, and Dr. Lloyd B. Clinton of Carthage were elected to membership in the Society.

JAMES I. TYREE, M.D., Secretary.

MARION COUNTY MEDICAL SOCIETY

At the last meeting of the Marion County Medical Society the members held a very interesting discussion of diphtheria as it is now and as it was in the preantitoxin days. They also gave some attention to smallpox and septic sore throat. The president, Dr. Roselle, was in the chair and there were also present, Drs. Hornback, Howell, Banks, Sanford, Farrell, Salyer and Ross.

Several interesting cases were described and all shared in the discussions.

MARY S. ROSS, M.D., Secretary.

PEMISCOT COUNTY MEDICAL SOCIETY

Pemiscot County Medical Society met in the Chamber of Commerce at Caruthersville, Tuesday, January 4, at 2 p. m., with Dr. W. H. Denton in the chair. The following members were present: Drs. Granger, Collins, Hudgins, Pinion, Denton and Cooper, and Dr. J. A. Crafton, of Phillippi, Tenn., visitor.

A paper on the development and history of malaria was read by Dr. L. E. Cooper.

Discussion as to the amount of fee for the administration of arsphenamine was made by several and placed at \$25.00 by the Society, and the fee for vaccine inoculations placed at \$5.00.

The board of censors passed favorably on the application of Dr. Warner Smith of Holland.

The program committee asked Drs. Hudgins and Pinion to read papers at next regular meeting, February 15.

L. E. COOPER, M.D., Secretary.

BOOK REVIEWS

THE SYMPATHETIC NERVOUS SYSTEM IN DISEASE. By W. Langdon Brown, M.A., M.D. (Cantab.), F.R.C.P. (Lond.), etc. London: Henry Frowde, Oxford University Press, Hodder & Stoughton, Ltd., Warwick Square, E. C., 1920. Price, \$4.25.

This small volume, one of the Oxford medical publications, appears in neat style and with clear print. The work should appeal to the general practitioner who is interested in the subjects treated. In the first chapter a plan of the sympathetic nervous system as regards the anatomy and physiology is briefly considered, but the larger and more commendable chapter deals with the inter-relationship of the endocrin gland system and the sympathetic nervous system. Some particular attention is devoted to the adrenal, thyroid, and pituitary glands. The author states that there are three common features between these systems, namely: (1) sympathetic innervation; (2) a lower carbohydrate tolerance; (3) they act and react with the reproductive organs. One chapter each is devoted to glycosuria, digestion and circulation. Vagotonia is discussed in one very short chapter in which the author does not consider very

seriously the conclusions of Eppinger and Hess. However, he admits "a germ of truth" resulting from their writings.

It may be suggested that a more complete or more explicit reference might have been appended.

A. L. S.

THE NEWER METHODS OF BLOOD AND URINE CHEMISTRY. By R. B. H. Gradwohl, M.D., Director of the Gradwohl Laboratories, Chicago and St. Louis, etc., and A. J. Blaivas, formerly Assistant in Same, etc. Second edition. With seventy-five illustrations and four color plates. St. Louis: C. V. Mosby Company, 1920. Price, \$5.00.

That it has been necessary to publish a second edition of this work following so soon upon the first publication demonstrates the high regard with which it is held by the profession and prophesies still further editions.

The chapters on technic and procedure are all that could be desired both in detail and in the comprehensiveness with which the different subjects are handled. This holds especially for those dealing with the more modern methods of blood analysis.

The chapters giving the clinical interpretations of the results obtained by blood analysis are of exceptional value. The detailed histories of case reports are perhaps superfluous and the conclusions would be as impressive were they reported in the aggregate.

F. I. R.

OPERATIVE GYNECOLOGY. By Harry Sturgeon Crossen, M.D., F.A.C.S., Associate in Gynecology, Washington University Medical School, etc. Second edition. Eight hundred and thirty-four original illustrations. St. Louis: C. V. Mosby Company, 1920. Price, \$10.00.

Crossen's Gynecology stands easily as one of the best examples of what a book on operative technic should be that has appeared in any language. The illustrations not only present the principles of the operations but actually show the details of the operations as they should be done, a merit quite unknown in other books in operative technic. The cuts are, in addition, well supported by a clear text that presents the theoretical phases of the operations. The book can be but a valued guide to the junior surgeon and a source of delight to the experienced operator. There is no more valuable book to be had on this subject and it reflects credit not alone on the author and publisher, but on American medicine as well.

A. E. H.

LES ANTIGENES ET LES ANTICORPS. Caracteres Généaux—Applications Diagnostiques, Applications Thérapeutiques. Par M. Nicolle (de l'Institut Pasteur). Paris: Masson et Cie, Editeurs, Libraires De L'Académie De Médecine 120, Bd Saint-Germain (Vie), 1920. Price, \$4.50 net.

Under the above title Professor Nicolle presents the substance of his Harben lectures on antigens and antibodies. The matter is presented particularly from the viewpoint of the diagnostic and therapeutic application of these ideas. In regard to serum therapy Dr. Nicolle considers antipneumococcus, gonococcus and meningococcus and typhoid serums. Vaccines are also considered as to the manner of their action and therapeutic effects.

R. L. T.

A MANUAL OF PATHOLOGY. By Guthrie McConnell, M.D., Associate in Pathology Western Reserve University Medical School, Cleveland, Ohio. Fourth Edition, Thoroughly Revised. 12 mo. volume of 611 pages, with 18 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$4.50 net.

That this book has run into its fourth edition

within a comparatively short time is sufficient proof of its merit. When the general practitioner, the specialist or the student, wants to refer to some pathological point he does not want to search through several big volumes of complicated technicality. This book serves every purpose necessary for reasonable reference to practical knowledge in pathology, including the nature and causes of infectious diseases and comprehensive survey of new growths. The book is well illustrated and can be recommended as the best of its kind in its particular field.

R. L. T.

PLASTIC SURGERY OF THE FACE. Based on Selected Cases of War Injuries of the Face, Including Burns. By H. D. Gillies, C.B.E., F.R.C.S., Major R.A.M.C., etc. With Chapter on the Prosthetic Problems of Plastic Surgery. By Capt. W. Kelsey Fry, M.C., R.A.M.C., etc. And Remarks on Anesthesia. By Capt. R. Wade, R.A.M.C., Late senior anesthetist, Queen's Hospital, etc. Oxford University Press, American Branch, 35 W. 32d St., New York, 1920. Price, \$15.00.

The work is a monumental and pictorial record of the marvelous results achieved in plastic surgery during the last war, and its creation has been made possible only by the wealth of material at the disposal of the author, a veritable wizard in the art of reconstructive surgery. The wonderful and almost startling changes he has obtained in so many types of mutilating injuries of the face could not occur in the hands of a casual operator, but must of necessity require many efforts at such work as well as the utmost patience and skill. Such a series of cases could hardly be possible in civil practice.

The author presupposes a thorough knowledge of the principles of plastic surgery on the part of his readers and deals briefly and concisely with such principles as they apply to the particular case to be described. His chapter on anesthesia is commendable, especially his attitude toward intratracheal administration of ether in severe oral cases. Local anesthesia is preferred where feasible.

His method of presenting his subject is unique. He gives a résumé of the principles involved in that particular type of injury, describes the steps in the operation, gives his reasons therefor, shows photos before surgery, intermediate conditions, and the final results, and gives diagrams of the tissues excised, and the flap outlines.

Numerous failures are also given and analyzed. His original tubed pedicle flaps and osteochondral grafts are illustrated by several cases, and he gives much prominence to the use of the Esser epithelial inlay in a variety of conditions.

His chapter on the reconstruction of noses follows largely the principles involved by Keegan 20 years ago, to whom he gives full credit. His comparatively good end results in these nose deformities speaks most highly of his ability, as a nose is exceedingly difficult to reconstruct so that it does not give a ludicrous appearance.

Several cases illustrating the use of orthodontic appliances used in conjunction with surgery are discussed in detail.

One entire chapter is devoted to deformities caused by burns, and is perhaps the most helpful of all his work for the civilian surgeon who rarely encounters face deformities like those resulting from war injuries. His good results are due in part to the comparatively healthy tissue he could deal with—a marked advantage over us whose work in plastic surgery in this country consists largely in the reconstruction of the features destroyed by luetic or malignant disease with resultant poor adjacent tissues to work upon.

The work as a whole is an agreeable surprise, utilizing those principles long established but good even now, as well as bringing out much that is new and confirming the results with a wealth of case photographs. The printers' art has also been well utilized to add charm and value to this work.

C. F. S.

MASSAGE AND EXERCISES COMBINED. A Permanent Physical Culture Course for Men, Women and Children. With 86 Illustrations and Deep Breathing Exercises. By Albrecht Jensen. Formerly in Charge of Medical Massage Clinics at Polyclinic Hospital and Other Hospitals, New York. New York, N. Y.: Published by the author, Box 73, G. P. O., New York City, 1920.

A book teaching a fairly good system of home exercises.

C. O. R.

REFRACTION AND MOTILITY OF THE EYE. With Chapters on Color Blindness and the Field of Vision. Designed for students and practitioners. By Ellice M. Alger, M.D., F.A.C.S., Professor of Ophthalmology at the New York Postgraduate Medical School, etc. With one hundred and twenty-five illustrations. Second Revised Edition. Philadelphia: F. A. Davis Company, publishers, 1920.

This book, "prepared originally as a series of lectures to the writer's post-graduate students," is "especially designed to meet what the writer conceives to be the needs of two individuals, the general practitioner and the embryo ophthalmologist." It presupposes a knowledge of optics, anatomy, and physiology, and yet is evidently an effort to make the matter understood without thorough knowledge of these fundamental subjects. They are treated meagerly in the chapters on optics and errors of refraction, and alluded to in other chapters indefinitely and in unexplained technical terms, which is confusing to one without the presupposed knowledge.

As a working manual for one who has not had thorough training in actual practice it contains much that is helpful in description of methods of examination and application of means of correction and treatment. Its defects are those usual to didactic lectures,—redundancy and indefinite explanations.

Its value is principally in the point of view—which is different from that of the more complete text-books; in this case a low power view of the general subject with recognition of the relations of its different parts.

R. J. C.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

MERCURY (MERCURIC) BENZOATE-SEYDEL.—A brand of mercuric benzoate (see New and Nonofficial Remedies, 1920, p. 181) complying with the N. N. R. standards. Seydel Manufacturing Co., Jersey City, N. J. (*Jour. A. M. A.*, Dec. 4, 1920, p. 1569).

CULTURE OF BACILLUS BULGARICUS-COLEMAN.—A pure culture of *Bacillus Bulgaricus*, marketed in bottles containing about 90 c.c. This culture is stated to be suitable for all purposes for which *Bacillus Bulgaricus* is used (see general article on Lactic Acid Producing Organisms and Preparations, New and Nonofficial Remedies, 1920, p. 156). Coleman Lab-

atories, Wheeling, W. Va. (*Jour. A. M. A.*, Dec. 18, 1920, p. 1717).

PNEUMOCOCCUS GLYCEROL VACCINE (TYPES I, II, III POLYVALENT)-LEDERLE.—A suspension of killed pneumococci of characteristic strains of Types I, II and III (equal proportions) in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. Supplied in packages of three vials containing the glycerol vaccine and of three vials of sterile diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of pneumococcus vaccine, see New and Nonofficial Remedies, 1920, p. 286. Lederle Antitoxin Laboratories, New York.

PERTUSSIS GLYCEROL VACCINE-LEDERLE.—A suspension of killed pertussis bacteria (Bordet) of eight strains, in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of five vials containing the glycerol vaccine, and five vials of sterile diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of pertussis bacillus vaccine, see New and Nonofficial Remedies, 1920, p. 235. Lederle Antitoxin Laboratories, New York.

TYPHOID GLYCEROL VACCINE (PROPHYLACTIC)-LEDERLE.—A suspension of killed typhoid bacteria (Rawling's strain) in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of three vials containing the vaccine, and three vials of diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of typhoid vaccines, see New and Nonofficial Remedies, 1920, p. 291. Lederle Antitoxin Laboratories, New York.

TYPHOID COMBINED GLYCEROL VACCINE (PROPHYLACTIC)-LEDERLE.—A suspension of killed typhoid bacteria (Rawling's strain), 50 per cent.; killed paratyphoid bacteria, Type A, 25 per cent., and killed paratyphoid bacteria, Type B, 25 per cent., in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol 1 per cent. The product is supplied in packages of three vials containing the vaccine, and three vials of sterile diluent with which to make the proper dilution at the time of injection. For a discussion of the actions and uses of typhoid vaccines, see New and Nonofficial Remedies, 1920, p. 291. Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, Dec. 25, 1920, p. 1783).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Linonine (Kerr Chemical Co.) held misbranded on the ground that the curative claims were held false and fraudulent. Valentine's Sarsaparilla Compound with Potassium Iodide (Allan Pfeiffer Chemical Co.), sold under therapeutic claims which were false and fraudulent. Olive Branch (Olive Branch Remedy Co.), misbranded in that the curative claims were false and fraudulent. Prince's Pills, Liniment and Tru-Vigor Nerve Tablets (Boston Drug and Chemical Co.), misbranded in that the therapeutic claims made for them were held false and fraudulent. Mrs. Summers' Absorbent Pile Remedy, Mrs. Summers' Womb, Ovarian and Kidney Tonic and Vitalizer

Tablets and Mrs. Summers' Heart, Brain and Nerve Pills (Vanderhof and Co.), misbranded in that they were sold under therapeutic claims which were false and fraudulent. Compound Syrup of Hypophosphites, Bromo Febrin, Hystoria, Aromatic Cod Liver Oil, Red Cross Kidney and Liver Regulator, White Pine and Tar Syrup, and Boro-Thymine (Cal-Sino Co.), misbranded in that the therapeutic claims were false and fraudulent (some were also held adulterated because their composition was misleading or falsely declared) (*Jour. A. M. A.*, Dec. 11, 1920, page 1663).

PHYSICIAN'S STOCK IN PRESCRIPTION PRODUCTS.—Is the public getting a square deal when physicians are financially interested in the products that they may be called on to prescribe? Is the average layman's confidence in the medical profession likely to be enhanced when he learns that the physician to whom he went for treatment has a financial interest in the therapeutic agent which was prescribed? It cannot be too often emphasized that it is against public interest and scientific medicine for physicians to be financially interested in the sale of products which they may be called on to prescribe for the sick. It is perfectly true that there are many physicians who would not consciously permit financial considerations to warp their judgment, but it is not humanly possible to remain unbiased in cases of this sort (*Jour. A. M. A.*, Dec. 11, 1920, p. 1662).

THE PARRY MEDICINE CO. BARRED FROM THE MAILS.—For some years Pittsburgh has harbored a quack concern known as the Parry Medicine Company. The president of the company was one Leonard L. Parry, who advertised himself as "Dad Parry, the Healer" and also as "The Miracle Man." In April, 1917, Parry, who is an obviously ignorant faker, was arrested and convicted of the illegal practice of medicine and was sentenced to pay a fine and to serve a six months' sentence in jail. Apparently as soon as Parry got out of jail he went right back to his quackery. As a result the federal authorities took action, and the Parry Medicine Company has been denied the use of the mails. The "medicines" put out by the Parry concern were fourteen in number and were numbered consecutively. They were essentially the same in composition, differing only in flavoring. Each was composed approximately of alcohol, 25 per cent.; water, 25 per cent., and olive oil, 50 per cent., to which was added a few drops of essential oils. No. 1 was for Tuberculosis, Lungs, Bones or Flesh, Gallstones or Tape-worm. No. 2 was for Cancers, Adenoids, Hemorrhoids, Piles, Asthma, Goiter, Typhoid and all other fevers. Extensive curative claims were similarly ascribed to the remaining twelve preparations (*Jour. A. M. A.*, Dec. 18, 1920, p. 1732).

GERMAN INSTITUTE FOR EXAMINATION OF PHARMACEUTICALS.—It is proposed that the commission founded years ago by the German internists—the Arzneimittel-Kommission—is to be changed into an institution to investigate new pharmaceutical articles and supply information thereon to physicians on demand. An information bureau and bibliographic center is planned, and it is proposed to test new inventions for the manufacturers. The commission announces that it has been decided not to restrict the examinations to the chemical, pharmaceutical and pharmacologic side of the matter, but in given cases tests and investigations at the bedside will be made. It is stated that the pharmacologic investigations are to be made at the pharmacologic institute of the University of Berlin, which is in charge of Heffter, and that the institute is to be the headquarters of the new Prüfungsamt (*Jour. A. M. A.*, Dec. 25, 1920, p. 1791).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

St. Louis, Mo., MARCH, 1921.

NUMBER 3

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3529 Pine St., St. Louis, Mo.

PUBLICATION { W. H. BREUER, M. D., Chairman
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ORIGINAL ARTICLES

HEALTH AND DISEASE*

GEORGE DOCK, M.D.

ST. LOUIS

"At the country of the Gadarenes, which is over against Galilee, there met Him a certain man out of the city, who had demons; and for a long time he had worn no clothes, and abode not in any house, but in the tombs . . . and he was kept under guard, and bound with chains and fetters; and breaking the bands asunder he was driven by the demon into the desert. Jesus asked him, what is thy name, and he said, Legion; for many demons were entered into him. Now there was a herd of many swine feeding on the mountain; and the demons entreated him that he would give them leave to enter into them. And he gave them leave. And the demons came out from the man, and entered into the swine; and the herd rushed down the steep into the lake and were choked." (Luke 8:26, et seq.)

This brief story seems appropriate to a Sunday lecture on health and disease. It is old, but not as old as historical medicine; it was written by one who is supposed to have been a physician. It seems to help explain the belief, not yet abandoned, that diseases are caused by possession of demons, and when a cure is still sought by exorcism or by the use of disgusting remedies. The prehistoric trepannings exhibited by many mummy skulls have been ascribed with some reason to an effort at letting out demons in such conditions as headache and epilepsy, though they may have so simple an analogy as that of pulling out an aching tooth.

Some people imagine the belief in the demonic cause of disease is justified or finds support in the known facts regarding germ disease, and indeed without an extensive knowledge of recent medical discussions there

does seem to be no essential difference between non-corporeal demons and germs so small that they can pass through a porcelain filter.

Let me try to explain what we understand by disease now. This is sometimes defined as dis-ease, or as absence of health. If we ask what health is, we are told by the Standard Dictionary, "health is that state in which all natural functions are performed freely without pain or disease." Correct, but not much more satisfactory than a good many other definitions of abstract conceptions. Pain we need not define. The same dictionary says of disease: "Any departure from, failure in, or perversion of physiological action, in the material constitution or functional integrity of the living organism." This drives us back to the study of anatomy and physiology and I hope at least an outline of these has survived from your school days, for I shall not try to recall them. The definition refers to two kinds of disease doctors often mention—organic and functional. Organic diseases are those in which some organ can be recognized as altered in shape, size, consistency or position, and so affect health. For example, hardening of the arteries, in which the walls of those vessels actually contain plates of hard chalk; or appendicitis, in which the vermiform appendix of the large bowel is affected by one or more of the changes covered by the word inflammation.

Functional diseases are those in which some function is so altered as to cause symptoms. So, there is a normal character of the pulse, one feature being a regularity so striking that it is said Galileo used his own pulse to time the swing of the pendulum in his celebrated observation. If the pulse skips a beat we may say the function of rhythm is affected and leave it at that. But in some cases the skipping is due to physical alteration in the heart wall—itsself an organic disease. So we discover that the determination of a functional disease is not always easy. There may be another reason for thinking a disease is func-

*Washington University Lecture, January 9, 1921.

tional. We may not be in possession of methods that permit the recognition of organic disease. This is illustrated by many diseases of the brain and spinal cord. Until we had special methods of examination, we could not see any organic basis for such diseases as the recent epidemic of sleeping sickness, or of the condition known as paresis. Now it is easy enough to find definite though minute changes in those diseases, but it is quite possible there are some other diseases that are truly functional though we continue to seek for organic changes in all of them.

Pain or discomfort are by no means always present in disease. Some of the most serious diseases may be quite unsuspected by the bearer for months or years. Many subsidiary or secondary diseases are found in the bodies of people who die from various affections at all ages, and these often have no symptoms, but most of them, like those first mentioned, can usually be found by patient search.

We are all in the habit of thinking of diseases as if they had a separate existence. In fact they are spoken of sometimes as entities—"beings, without reference to distinguishing attributes or properties." But in reality there are no such things—there are only people, or lower animals or plants, with diseases.

One cannot think clearly about diseases without thinking of the causes. Many diseases are more or less complicated reactions of the body to some kind of injury, either by parasitic invaders, from those invisible by the microscope, through bacteria, bacilli, spirilla, spirochetes—to name only a few varieties—to the gross, like the larger tapeworms; some come from mechanical injuries like blows, heat or cold, light or even invisible rays, like those of radium, or electricity. Some from chemical causes, like lead poisoning, or in war gassing, now recommended as a pleasant improvement on the cruder gunpowder and other explosives. Some are due, assisted by germs in many cases, to lack of coordination of the various body functions. These concern not only the well known functions of digestion, excretion, etc. As many know, such things as growth of bone, fat, hair and other tissues, activity of circulation, digestion and assimilation and some other functions, are under the control of glands, many of them quite small, called ductless glands. Such various conditions as dwarfism and giantism, many objects known in the vaudeville and circus world as freaks, cretinism and other less spectacular but disabling conditions are due to anomalies of the ductless glands. These may have been thrown out of their normal balance by some other disease such as a germ infection, or even some tumor—cancer, growing in a ductless gland.

The war hastened the growth of knowledge of some important diseases long known but not satisfactorily explained by producing examples on a large scale. Pellagra, scurvy, beriberi and rickets belong to a group called deficiency diseases because they are due to defects in diet, especially to lack of certain food elements of a very subtle kind, so that merely heating milk or polishing grains of rice cause serious disease. It is instructive to see how when medicine almost wholly prevented the old army plagues, like typhoid fever, dysentery, smallpox and tetanus, nature, so jealous of its right to do harm as well as good, through non-production, blockades, lack of fertilizers, imperfect transportation and poverty produced an enormous crop of far more serious diseases, not only in armies, but even among non-combatants.

After plants were classified into groups, efforts were made to do the same thing with disease and in the same way—with families, genera and species. But there is an essential difference between the varieties of plants and the varieties of disease. It was suggested by a keen old physician before the days of germs, that there are as many kinds of pneumonia as there are of apples. Recently we have been able to recognize a large number of distinct pneumonia-producing germs. But in addition to the variations due to the kinds of germs, there are in diseases the reactions of the numerous organs of the individual patient, sometimes spoken of as constitution, the different localizations of germs in the body, and the so-called secondary infections. So the pneumonia patient may have meningitis or peritonitis from the same kind of germ as that in the lung, or he may have erysipelas from its own germ on his skin or in his nose and sinuses.

One source of difficulty in the discussion of medical topics depends on the combination of old and new, and the fact that the old part is small, the new part large, rapidly expanding, and rapidly changing with new knowledge. The real facts known to the Greek physicians at the time of Pericles continued to be valid with few additions until after the age of Shakespeare. Harvey did not describe the circulation of the blood until after the Pilgrims had settled in Massachusetts. The microscope was not brought into practical form until late in the seventeenth century, and not used in the diagnosis of diseases of the kidney and the blood, so essential, until seventy-five years ago. The relations between the diseased organs and symptoms were not systematically studied until late in the eighteenth century, about the time the fundamental discoveries in chemistry and physiology were being made. Examination by percussion and auscultation is

barely one hundred years old. More rapid enlightenment came in the nineteenth century and the advance is so rapid that practically all we know of ductless gland disease is less than forty years old. The germs of malaria and tuberculosis have been known just forty years, that of syphilis less than twenty; some of the most important details of heart function, explaining disease, were made known by Doctor Erlanger. What seems to the uninformed a mere fickleness and aimless trial of one method of treatment after another is really an adaptation of means to new and revealing knowledge of disease processes. We know a great deal about the natural history of many diseases, and how to ascertain what is going on in the sick body; we have methods of recognizing how measures of treatment act. Voltaire was quite right when he described the medicine of his time as the pouring of drugs of which we knew little into bodies of which we knew less, but the conditions now are very different although ignorance is not wholly dispelled.

Disease is made known by symptoms and signs. Symptom is a very old word, having been used by Greek physicians to indicate a mark or sign. The word has been introduced more recently as a technical term, and especially to indicate things only to be made out by the senses of the expert, with or without instruments. No sharp line can be drawn between symptoms and signs, but as an example can be cited the headache a patient has in inflammation of a sinus. This is a symptom. The pus or polyp observed on examination of the sinuses by an expert is a sign. From the symptoms and signs in a given patient, the physician works up the complete picture of the disease, that is the diagnosis.

The value of different symptoms and signs varies according to the certainty with which they can be referred to the underlying condition, and very few of them are plain and unequivocal. Some examples may make this clearer: To return to headache; pain of the same character may occur from such dissimilar things as an acute infectious disease, like influenza, typhoid fever, smallpox, etc.; from a disease of the eye, or ear; from meningitis; brain tumor; kidney disease; chronic digestive disturbance; nervous exhaustion and anemia and many others. Toothache is familiar to many. Here the pain is due to inflammation of the small nerves in the teeth. But very often the pain the subject refers so confidently to a certain tooth is really caused by another tooth in the other jaw. Here I may refer to the practice of taking X-ray pictures of teeth. Most people know of abscesses about teeth, and so-called gum-boils. It has long been known that in many cases there are

abscesses at the roots of teeth without pain or a feeling of the tooth being too high. It became known later that these small foci of infection can cause other diseases, such as chronic joint diseases, serious blood diseases, and diseases of the eyes and sinuses. By X-ray pictures, which have been available only twenty-five years, we can often show the existence of the symptomless processes, such as root abscesses, and then carry out appropriate treatment. Similar focal infections, as they are called, can occur in many other parts of the body, must be searched for in many cases, and sometimes several may have to be treated—tonsils, teeth, prostate, fallopian tube.

Another misleading pain is that of angina pectoris, the cause of which is in the heart or blood vessels. It was named on account of the choking or compressed sensation in the chest. But in many cases with the same organic disease in the heart, the pain may be referred not to the chest, but felt in the jaws, or higher up in the head or in the arm, sometimes with tingling of the fingers, as when the crazy-bone is struck. Or the pain may be referred to the abdomen, and may be mistaken, even by experienced physicians, who themselves have angina pectoris, for ulcer or cancer of the stomach.

Patients with pneumonia often have pain, sometimes of an excruciating kind. This is very remarkable when we know that the healthy lung is almost insensible to pain. As pneumonia patients often have pleurisy it might be supposed that the pneumonia pain arises in the pleura. The pleura can be shown to be sensitive in certain areas and especially when inflamed, but the pain in pneumonia does not always resemble that of pleurisy and it seems as if there was a difference between pain due to the pneumonic lung and the pain due to the inflamed pleura. The pain from the lung or pleura is transmitted through the intercostal nerves, or the nerves that run between the ribs and send out filaments to the skin over the chest. The inflamed intercostal nerves themselves may also give a pain simulating that of pleurisy. A particular form of intercostal neuritis is associated with a very spectacular disease known as shingles or herpes zoster. This latter can occur in any part of the body, but when it appears on the chest is preceded by a pain that is very often taken for that of pneumonia or pleurisy.

The pain of pneumonia is by no means always felt over the chest, but may be referred very distinctly to the appendix region.

Appendicitis may serve as an example of pain from disease of an organ. The vermiform appendix is a vestige of a large piece of bowel in lower animals and is usually not more than two or three inches long and about

one-fifth of an inch thick. It is made up of a thin mucous membrane layer like that of the bowel, containing little bodies like tonsils, within a muscular layer, and on the outside a smooth serous membrane layer like the rest of the peritoneum. The appendix usually lies in the lower right abdomen in a direction pointing to three or four o'clock on the face of a watch, but may point in any direction and may be behind the large bowel instead of in front of it. It has a fine canal in which foreign bodies sometimes become caught, not only little sandy concretions from the contents of the intestine, but also large bodies of the same kind, often resembling date stones or prune stones; there may even be seeds of any kind or such foreign bodies as intestinal worms, fish bones, pins, or as recently published in the daily press, a needle. With or without foreign bodies germs may set up swelling of the mucous lining and of the tonsil-like tissue on the inside. Very little swelling from such a thing may cause a severe pain. The pain may be referred to the normal position of the appendix, or to the bladder or ovary below, or the gall-bladder above. But pain is rarely the only symptom. Very quickly the white blood corpuscles become increased in numbers as the result of an effort to overcome the local disease. As the result of the irritation reaching the peritoneum the abdominal muscles tend to become rigid over the painful spot and the blood pressure is raised from the peritoneal irritation. Constipation, nausea and vomiting may occur, with more or less fever from the poisons produced by the disease germs. The disease may cause a rupture of the wall of the appendix, in which case the contents of the appendix, highly contaminated from the intestine, escape into the peritoneum. Sometimes nature makes an effort to lessen the danger by gluing the surrounding tissues together, but sometimes the whole peritoneum becomes inflamed. The task of the physician in every such case is to find out as accurately as possible the extent of the damage and on account of the risk of rupture or peritonitis to operate and remove all the infectious material. It is obvious that time is an important element, and if the condition is treated merely symptomatically by relieving the pain, or overcoming the nausea and vomiting or lowering the temperature, loss of time with unnecessary damage or even death may result.

I mentioned the fact that appendicitis may simulate disease of the gall-bladder. The gall-bladder lies in a little corner of the abdomen in close relationship to a number of other organs that also have a strong tendency to become diseased, especially the pyloric end of the stomach, the duodenum, the pancreas and

the kidneys. The pain in gall-bladder disease itself may be due to inflammation of liver, as Doctor Graham has shown. In all these conditions sometimes spoken of as diseases of the right upper quadrant of the abdomen the task is to recognize the condition as accurately as possible and to carry out the proper treatment and here again symptomatic treatment alone is far more likely to do harm than good.

Another sort of pain often misunderstood is so-called sciatica or sciatic rheumatism. Here the nerve is quite superficial and the pain can easily be increased by pressure, so that the idea of local disease at that point is quite natural, and yet it may be due to pressure by a tumor or an inflammatory mass in the pelvis.

Some old but erroneous ideas about certain pains are hard to eradicate. The same newspaper that so accurately sets forth the weather prediction for the next day tells us that pain in the back means kidney disease. As a matter of fact, by far the greater number of patients with kidney disease have no pain in the back, and most pains in the back have nothing to do with kidney disease.

A very significant point about pain as a symptom is that although much has been learned by physiologists and physicians, practically nothing has been added to our knowledge by the numerous and busy healers whose practice is largely devoted to diseases in which pain is the prevailing feature.

Still other symptoms, apparently quite direct, are as misleading as pain. So with vomiting, which often results from something indigestible or inappropriate in the stomach, but may be due to disease of the brain, or in the uterus or ovaries, or in one of the many organs between those sites.

One might suppose that a symptom like salivation would point directly to the salivary glands, but the exciting cause may be in an entirely different organ, even in the heart.

Many other disturbances of sensation occur as symptoms, and like pain are misleading, and especially to the victim. In health the heart beat is not noticed, unless when overworking from exertion. But in not a few people the heart can be felt to miss a beat or give a very strong beat, or seem to flop or turn over. It does not turn over, no matter how real the sensation is. The sufferer is always alarmed at these sensations, but in many cases the underlying condition is not serious. On the other hand, in severe forms of heart disease, there may be no symptoms in the heart region, but only such indirect ones as shortness of breath or cough, or swelling of ankles, or a change of color. In these heart diseases, though the symptoms are so misleading, proper methods of examination—auscultation and percussion, X-ray, electrocardiograph

—enable us to make diagnoses with extraordinary accuracy. So accurate may be the work that in angina pectoris we can sometimes tell whether the disease is in one or the other of the two arteries of the heart muscle, although they are not larger than those in the wrist, and less than an inch apart at their beginning.

In the diagnosis of pneumonia or pleurisy other means of investigation are needed besides the study of symptoms and the use of physical signs. With physical signs we can tell where the pneumonia or pleurisy is unless the area is very small. On account of this possibility it is part of the routine now to get an X-ray picture of the chest. But it is not enough to know the position and extent of the disease. In the case of pneumonia we know that there are important differences and important dangers depending upon peculiarities of the causative germs and so we try to culture these germs from the sputum and from the blood.

Pneumonia is a good example of the modes of advance in the knowledge of germ disease. The first discoveries were made in 1880 when two great men, Pasteur in France and George M. Sternberg in the United States, independently discovered germs in cases of pneumonia that we know had causal importance, but they were not isolated until about five years later, after much work by many men. Much more work by many investigators in all parts of the world showed within a few more years that germs in the most typical cases of pneumonia resemble each other so closely that we can assume they belong to one species, but it has been learned within the last few years, and especially by work done in the Rockefeller Institute, that four different types of this species can be distinguished. The difference in the species of bacteria are made out by shape, size and manner of growth in artificial media, but the different types of pneumococci can only be distinguished by very delicate tests of the reactions of the germs in various ways, and especially by their effects on mice. But there are many other germs besides pneumococci that cause pneumonias and the danger in each case corresponds to the variety of germ or in the case of pneumococci to the type.

We can predict more accurately the probable complications and outcome by identifying the germ in each case, but in addition to this sort of knowledge we have the beginning of important improvements in treatment. It has been found by very extensive trials that a serum can be made which has curative properties for pneumococci of the type I. The poison from the germs can be isolated and by experimentation we can learn how much is needed to kill a mouse of a certain weight.

If we treat a horse with preparations of the culture of such a germ, the horse will make protective substances just as they are produced in a human subject in the process of healing. The blood serum of the treated horse will counteract the poison of the germs and is so powerful that a mouse can be given a million times the fatal dose, and yet if the protective horse serum is given at the same time the mouse will survive. If the horse serum is given later the protection will be weaker in proportion to the length of time between the administration of the poison and the antidote. This horse serum, containing so-called antibodies, can be used in the treatment of human disease and again is efficient in proportion as it is given early.

From all this we can see the necessity of not only recognizing pneumonia as early as possible but of isolating the germ and ascertaining the type. If the germ is type I the protective serum should be given, but must be given with certain precautions requiring practice on the part of the administrator and cannot be taken by the patient as one would take a dose of quinine or aspirin.

For the other pneumonia germs we have as yet no satisfactory vaccines or serums. It may be that not enough work has yet been done or there may be other reasons, which would take too long now to explain, why an antidote may not be found. On the other hand it would be just as wrong to say that we can never get such remedies as it would have been twenty years ago to say that we could never fly or never use wireless telegraphy.

In pleurisy we can recognize the position of the fluid that is caused by the inflammation, but here again there are many causes and the outcome depends on the nature of the germ in each case. For this reason it is not enough to depend on physical signs and the X-rays. We have to get some of the fluid by inserting a hollow needle under aseptic precautions and then examine the fluid obtained microscopically and in cultures. Microscopically we can sometimes find germs and especially in the cases where the fluid is purulent, but some very important cases that have precisely the same symptoms are due to tuberculosis of the pleura. The germs then may be so few that they cannot be found microscopically and the only way we can find them is to inoculate some of the fluid in a susceptible animal, especially a guinea pig or rabbit, which in from two to six weeks will show whether the process is tuberculous or not. The importance of the finding lies in the fact that in tuberculous pleurisy, not treated effectively, death follows in about half the cases. Those treated nearly all recover.

Shortness of breath is another very com-

mon and annoying or alarming symptom and also comes from a great variety of causes. It occurs in lung diseases like pneumonia and in that is not due merely to the fact that part of the lung is filled up with a coagulated fluid; in fact a large part of the lung may be filled up or may be destroyed by ulceration and yet the patient may not feel short of breath. A very frequent cause of shortness of breath is some form of heart disease and still another is an anemia, and then there are many conditions in the windpipe and bronchi that cause the same symptom.

Cough is equally misleading. It may come from a disease of the larynx or bronchi, but it may also come from a disease of the ear or pharynx, the tonsils, pleura, heart, stomach or lower abdominal organs. We know that cough may be caused from irritation of the pleura because when we aspirate fluid from the pleura if we, by accident or design, touch the surface of the pleura with the needle a very prompt cough will result.

The euphonious word "dyspepsia" looks and sounds trifling to those who do not know, but to those who know it deserves the name Legion quite as much as the man on the Gadarene hills, for many symptomatic devils enter into it. The word merely means troublesome digestion and narrowly applied covers cases in which one or more of the several functions of digestion are disturbed. These functions are partly muscular, partly glandular or secretory and partly nervous, and each has many possible alterations with corresponding symptoms. Dyspepsia may be due to diseases that affect any of these functions. In a few cases it depends on bad habits of eating, poor selection of food, or imperfect teeth. It often arises from and is kept up by chronic appendicitis, in which there are no characteristic symptoms although the disease in the appendix can often be recognized by examination. Many cases are due to gall-stones—again very often without typical symptoms. Very many are due to ulcers in the stomach or duodenum. In fact, experienced surgeons who have to operate on many of these cases have thought that chronic indigestion is always really ulcer. In not a few cases of dyspepsia there is already a cancer of the stomach. Every variety of dyspepsia has its own peculiar indications for treatment. It may be enough to put the teeth in order, to eat slowly and avoid certain foods. In some cases giving up tobacco, coffee, tea or cocoa suffice. The appendix and gall-stones cases will not recover without operations. The ulcer cases require prolonged dietetic and other treatment under constant care, and sometimes operation. The cancers can be thoroughly removed if recognized and operated early enough. In many cases the proper treatment

can only be determined by observing the patient under regulated diet, with examinations in various ways, including the use of the stomach tube and X-rays. A dyspepsia that persists in spite of all this care usually requires an operation, the success of which in many cases depends chiefly on how early the case comes under observation.

Symptoms such as alterations of size, shape, consistency and position of organs are significant as far as they go, but in every case the possible causes are numerous and the leading symptom is a very general one. Sometimes great alteration in size or shape may remain long unnoticed. It is remarkable how people may for weeks have enlargements of organs that alter the external contour, and yet do not discover them. The same is true of internal enlargements of organs that sometimes make themselves known by other symptoms, but sometimes do not. So there are dilatations of the main artery, the aorta, known as aneurysms, that cause pain or hoarseness or changes in the pupils, all by pressing on adjacent nerves. Others do not cause these symptoms or signs but give others by which they are easily recognized. Still others can only be made out by careful X-ray examinations directed to their detection.

I have spoken rather fully about symptoms likely to be noticed in patients. The most important signs are those that can only be made out by trained observers, with or without apparatus.

I have mentioned percussion and auscultation. There are also all the arrangements for looking into the body cavities by direct or reflected light. These as well as X-ray examinations require an amount of practice and experience rarely realized by the patient, because they look so easy. Nothing is commoner than to have patients who have been X-rayed, perhaps over a considerable period, ask for a print or a negative, with the idea that the appearances are as easy to interpret as a kodak picture of a baby or a landscape. The real facts are quite different and yet with training very extraordinary things may often be brought out. The training is not acquired merely by seeing a large series of patients, but is obtained in the first place by knowing the normal conditions. In the case of the stomach and bowels we do not see the organs themselves or the diseases in them. We fill the organs with a meal that does not transmit the rays and then see the silhouette, but the silhouette will not show such a thing as an ulcer or a tumor unless it is in profile. As we cannot depend on that chance we determine these things by comparing the action of the stomach and bowels with that of the normal. As one cannot experiment promiscuously with

normal subjects this sort of work, in the beginning, was done on lower animals, especially cats. For those who object to experiments on lower animals I might point out that a cat being X-rayed is not likely to be as much inconvenienced as it would be if played with by a small child, or even fondled by a grown person. Among the most valuable signs are those that depend on chemical or microscopic tests, but only when used in connection with other signs. The more complete the examination, the greater the value of each single sign. People sometimes go to a diagnostic laboratory and ask for a blood count, a serum test or some other isolated examination. Few diagnoses can be made in that way and wrong ones are more likely to be made than correct ones.

Something may be said about certain tests that are made by scratching the skin, applying some material and observing the reactions. These are used largely in testing for tuberculosis and for susceptibility to diphtheria. They depend on facts worked out by long experimentation and are of great value. The same method has recently been applied with success to the explanation of some very old symptoms that were long misunderstood. They were misunderstood partly because the symptoms differed so widely, but experiments on animals, made for a different purpose, made the relations clear. As everyone knows, certain people are poisoned by particular kinds of food. This was especially noticed as regards shell fish and strawberries, but sometimes similar symptoms followed very common foods, such as milk, rice or eggs. In the case of the rarer foods, people were said to have an idiosyncrasy, a word that sounded well, but meant nothing. In the case of common foods, as the symptoms were first noticed in children, the victims were supposed to be particular or perverse, and often punished by ear-boxing, spanking or starvation, or forced to swallow the foods objected to. The symptoms were such things as vomiting and diarrhea, sometimes of great violence, hives and sometimes asthma. Asthma is also a symptom affecting some people under strange conditions. Some have it when sleeping on a feather pillow, even if the presence of feathers is not known to the patient. Others get it on going near horses or stables where horses are kept. The old explanation in those cases was "nervousness," and the subjects were looked on either as liars or insane. The difference between such a person and one who believes she is Queen Elizabeth or Pocahontas does not seem very great when we do not understand the situation, but now we know that in all such cases the body has oversensitiveness to certain substances in the food, or

the impalpable dust from the feathers or horse dandruff, or from dozens of food products, pollens from weeds, and dust. What is most important is that the patient can become immunized by proper treatment.

It is not long since many symptoms figured as diseases—dropsy, jaundice, enlarged liver or spleen and many others. Then it was supposed that each disease had not one, but many curative drugs.

The newer knowledge of disease makes it necessary for the physician to know much more than the meaning of symptoms, or even the name of the chief disease. For purposes of statistics we have to give a single name to each disease, but true diagnosis from the standpoint of treatment consists in determining not only the possible diseases of all organs, but also, and even more, the physiological function of all, including those not actually diseased. This is expressed by saying we treat the patient, not the disease—even in those diseases with specific treatment, like diphtheria—the obverse of the fact I stated early, that there are no diseases, only people with diseases.

These great fundamental changes in the knowledge of disease radically affect the treatment. The old idea of treating them according to principles that were supposed to be of universal application is gone. Most of the remedies that were used we know had no effect on the patient unless in a superficial way, or by lessening pain and discomfort, the latter, of course, not insignificant. Further efforts at enlarging and improving all methods are constantly being made, with much success already, and every expectation of more.

What shall the patient and especially the patient without medical or nursing training do in regard to symptoms of disease? He cannot do as he did when it was supposed that each disease had one or more remedies; when as with Mark Twain's Sea Captain, all that was necessary was to look in a list of symptoms and take from the chest the numbered pill or potion indicated, with the understanding that if bottle 15 was empty a dose of 7 plus 8 would do the work.

What he has to do now is about as follows:

He should in the first place select his grandparents and parents in such a way as to get himself the best constitution possible. He should live so as to preserve that constitution. He should know how to apply simple remedies for the trifling ailments that affect one—to use a cathartic when he has eaten something indigestible; to dress a wound aseptically; to stop food when the stomach rebels. He should be so educated by his parents, his teachers, his school physicians, his school

nurses, his city or village health officers, and his college personal hygiene course, as to secure the greatest possible freedom from disease. Much beyond that he should not care to go. How can he? It takes at least six years after the high school to make the beginning of a doctor. After that most states require a year in a good hospital before the young doctor is allowed to practice. The time is none too long. It is an old proverb that the physician who is his own doctor has a fool for a patient. If this is true after seven to ten years of definite application, how much can we expect from one who has heard a few lectures and perhaps read a book or two?

The person who has symptoms, who has pain or loses weight or has a cough, no appetite, vomits, has chills, or is losing color or has any other abnormal feeling, instead of trying to decide what to take should at once see a physician, one he knows something about, if possible one who knows something about him. Let him tell such a one his symptoms briefly and clearly, allow himself to be examined and follow the physician's advice. One does not take his watch apart and try to doctor it when it goes wrong; one does not do more than the simplest things with an automobile engine that shows symptoms. The human engine is infinitely more complex, the explanation of a human disease much more difficult in most cases than that of a gas engine; the individual's judgment when ailing less clear than in health. The pain of appendicitis sometimes follows errors in diet, and is often supposed to be due to unripe apples, to grapes or peanuts causing indigestion or colic. If this is true a cathartic to expel the offending material would be in order. If, however, there is a perforating appendix time will be lost, perhaps irreparable damage done if a speedy diagnosis and operation are not made. Hence the need of examination first, then only to begin the treatment.

All I have said seems quite contrary to the confident assertions made so extensively in almost every newspaper and many magazines. Are the remedies so highly lauded of no value? It would be too sweeping to say they are all worthless or all dangerous, though no loss would follow if those beliefs were acted upon. Let me point out some definite objections. Headache remedies are conspicuous. Most of them, and all that relieve the pain, contain drugs that are habit forming or else dangerously affect the heart. If a brief treatment will relieve a headache and repeated use is not necessary except at long intervals, no harm may be done. But even then it should be remembered that the headache may be due to a dangerous inflammation behind the eyes, to a brain tumor, an error of refraction needing

glasses, a disease of the kidneys, of the blood vessels, or many other things. If the headache is severe or repeated anything else than a thorough examination is a serious mistake.

Many advertised remedies are dangerous because they cause deferring the proper steps until valuable time is lost. If a ready-made medicine will stop a cold in two minutes, why go to bed? Yet innumerable examples prove that in such conditions rest and simple treatment are more valuable than any drug so far known, and indispensable even with the most promising serum or vaccine.

The same sort of harm occurs in all the dyspepsia cures. The relief that seems so magical could in most cases be gained without the "sure cures," from a few swallows of milk, toast or cracker, but even then the thorough examination is essential to real success, and putting this off on account of simulated relief may make all the difference between real recovery and a painful and fatal illness.

Perhaps the most serious harm in ready-made medicines is the perpetual suggestion that in order to keep well one must constantly be dosing himself. Just the opposite is true.

Some suggestions border on the criminal, such as the consumption cures and the assertion that lockjaw—part of our Chinese celebration of July Fourth—can be prevented by an external application. In lockjaw this may cause neglect of the precious early use of serum and so cause death.

On considering the conditions it would seem that more rigid supervision of ready-made medicine should be exercised by responsible authorities. We go to considerable trouble to see that milk is fairly free from germs. All cities go to great expense to get pure water, and yet the loss of time from using ineffectual symptomatic remedies and the danger from habit-forming drugs would seem just as important as the care of water and milk. The subject, however, is so complicated that it is impossible to go into the details at this time.

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THE DIAGNOSIS OF ACUTE SEPTIC OSTEOMYELITIS

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The importance of the recognition of acute septic osteomyelitis early in the course of the disease cannot be over-estimated. The advantages of an early diagnosis and the institution of prompt surgical measures for this disease have been fully appreciated for at least a quarter of a century. Delay in these cases has been universally condemned and it has been termed

"a surgical sin" to fail to recognize and properly treat a case of acute septic osteomyelitis early in the course of the disease.

In spite of all these warnings and advice against delay, I doubt if, at the present time, acute septic osteomyelitis is more often correctly diagnosed in its incipient stages than it was twenty years ago. Many years have passed since Mr. Holmes wrote that "acute septic osteomyelitis is more frequently recognized at postmortem examination than at the bedside of the sick." I believe that this statement holds good at the present time. The diagnosis of osteomyelitis does not mean the diagnosis of subperiosteal, subfascial, or subcutaneous abscess formation, but the recognition of the condition while it is confined to the bone where it originated. The symptoms so often described and looked for as being characteristic of osteomyelitis, namely, redness, swelling, superficial tenderness and fluctuation, are not symptoms of osteomyelitis at all. They are the symptoms of the complications of osteomyelitis. They only occur after the inflammatory process has extended beyond the bone and involved the soft tissues.

What then are the symptoms more or less characteristic of acute septic osteomyelitis? The sudden onset of septic symptoms is present in virulent cases. The temperature, pulse-rate, leucocyte count and nervous system give positive evidences of a marked infection. The diagnosis must then be arrived at from the local signs and symptoms and by the exclusion of other diseases that simulate osteomyelitis.

The most constant and earliest local symptom of osteomyelitis is pain. It is extreme, sudden in onset and continuous, but not often definitely localized. When the sepsis is profound, the pain may not be complained of as being so intense—it is dulled by the toxemia. Perforation of the periosteum by the inflammatory exudate relieves the pressure and diminishes the pain.

The tenderness in osteomyelitis is a most helpful sign in making the diagnosis; superficial tenderness is absent during the early course of the disease and only becomes present when the soft tissues are involved by the inflammatory process. Superficial tenderness is not a symptom of osteomyelitis, but a symptom of its complications. Deep tenderness over the primary bony focus of the disease is a constant and valuable sign. It is elicited only by deep, that is firm, and continued pressure. If osteomyelitis is suspected in the tibia, firm pressure is made at a point just below the position of the epiphysis. After a few seconds the pain will suddenly become very intense and continues until the pressure is relieved. This is a valuable sign in the early recognition of an osteomyelitic focus.

The entire shaft of the bone, the seat of osteomyelitis, may be tender to tapping on the bone. This often aids in determining the bone affected.

In a few cases of acute osteomyelitis, cyanosis and edema of the affected extremity may occur early in the course of the disease. These signs are by no means constant and should not be expected in the majority of cases.

Loss of Function.—"In a limb, the seat of an acute osteomyelitis, all functions are usually completely suspended. It is as useless as though one of the principal bones had been fractured. The patient is unable to raise it or move the nearest joint. The limb is not only useless, but the patient complains of a sensation as though it would break on its being lifted, or otherwise manipulated." This is as true today as it was when that close clinical observer, Nicholas Senn, wrote it over thirty years ago. It has escaped many of the writers of modern textbooks. It is mentioned here with the hope that it will prevent some case of osteomyelitis being diagnosed infantile paralysis.

The x-ray is of little value until considerable bony destruction has occurred. We should not wait for definite x-ray localization before making the diagnosis.

In the differential diagnosis of osteomyelitis, such diseases as typhoid fever and rheumatism are generally given consideration. These are not confusing in making an early diagnosis. They are fully discussed in all textbooks and will not be considered here.

There is one acute condition seldom mentioned in the discussion of osteomyelitis that is in some cases exceedingly difficult, if not impossible to differentiate. I refer to acute poliomyelitis or infantile paralysis, involving, as it often does, one extremity.

It is not often that poliomyelitis is diagnosed as osteomyelitis, but many times the reverse is true. Since we have been confronted in recent years with such variations in the extent and intensity of the various acute infections involving the nervous system, we are perhaps especially keen in recognizing atypical types of these diseases, and for this reason more likely to overlook affections which markedly simulate them. While increasing experience and the recognition of atypical types in a measure necessitated a revision of the old views on acute poliomyelitis, we still have with us now and then a case that falls within the description given by E. Farquhar Bussard ten years ago. Bussard says that "acute poliomyelitis is an acute, probably specific febrile illness, affecting children and young adults, characterized clinically by a rapid atrophic paralysis of various skeletal muscles, usually those of the limbs, a paralysis which reaches

its maximum in a few hours and tends toward recovery in some parts and to the production of permanent disability and deformity in others." In osteomyelitis and poliomyelitis the differences in the septic symptoms, the paralysis, the reflexes and cutaneous sensibility are all matters of degree only. They are very similar. The deep tenderness is perhaps the most valuable distinguishing sign.

From an academic standpoint, it might seem that I have over-estimated the seriousness, the difficulties of early diagnosis and the frequency of occurrence of acute osteomyelitis. It is true that these rapid and serious cases, incorrectly diagnosed until an abscess is apparent, are seldom recorded in the literature. They are, however, recorded indelibly in the minds of those who saw them at the beginning of the illness. Now and then, some rare case is published; for instance, Vignord reports two cases of acute osteomyelitis in which the disease was so rapid that the patients died in 48 hours from the beginning of the illness (*Presse Medical*, Paris, August 25th, 1919).

It might be properly asked, is acute osteomyelitis ever diagnosed and operated before it has extended beyond the confines of the bone marrow? Few have performed or seen such operations, but they are occasionally done, although the literature of the last twenty-five years would not indicate it. In 1896 (*Annals of Surgery*) Morton and White reported cases operated before the formation of pus (Vol. 24, p. 236).

Personally, in an experience of 206 cases, extending over a period of twenty-three years, I have operated for acute osteomyelitis before the periosteum was involved, in only three instances.

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VARICELLA IN THE ADULT

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Chicken-pox was not clearly differentiated from smallpox, though described by Ingrassias in 1553, until Fuller in 1730 and Heberden in 1767 fully established them as separate diseases.¹ Their non identity is borne out of course by the fact that chicken-pox and smallpox, and chicken-pox and vaccinia, are not mutually protective. That chicken-pox occurs in the adult was denied until recently by a great many men and as a consequence physicians have looked upon varicella as a disease of childhood for so long that its phe-

nomena in adults has been lost sight of or passed unnoticed.²

Most of the textbooks and the literature in general give only passing notice to some variations in the symptoms and prodromata as they occur in the adult,³ but Welsh and Schamberg,⁴ and Schamberg,⁵ devote a chapter to the subject in which they say "many writers of prominence have caused varicella in adults to be regarded as a *rara avis*."⁶

These opinions are not borne out by their experiences, as thirty-five cases came under their observation in the Municipal Hospital at Philadelphia, likewise the figures of Wanklyn at the diagnosing station of the Asylums Board of London during the smallpox epidemic of 1901-1902. Of 200 cases of varicella which were seen, 33 of them were in adults. In St. Louis during a period of 12 years 86 cases have been observed. From these experiences it is patent to anyone that persons of all ages are susceptible to the disease. It might be well to review the generally accepted description of chicken-pox, and then to point out the essential differences.

Varicella as usually defined is "a contagious febrile systemic affection of benign type occurring chiefly in children and characterized by an eruption of discrete, scattered, superficially seated, thin-walled, usually small pea-sized vesicles."⁶

Incubation Period.—Two to three weeks. Shorter periods are claimed, but experience shows the above limits to be practically without exceptions.

Etiology.—Not definitely established though undoubtedly contained in vesicles.

Prodromal Period.—"In children, the first recognizable evidence may be the eruption. On the other hand, there may be for several hours, or for one or two days, premonitory symptoms of slight malaise, chilliness, and mild febrile action, which in average cases are scarcely sufficiently well marked to elicit more than passing attention. Exceptionally, however, in extremely susceptible children and in cases in which the eruption is extensive, the prodromal disturbance may be relatively severe. The eruption makes its appearance slowly as a rule and never all at once, presenting usually first upon the trunk and head, more especially the scalp. If seen in their earliest formation, or if development of the later lesions is watched, the first stage as a rule is noted to be a small hyperemic spot, in the center of which a minute, elevated, vesicopapule or vesicle appears, pin-point to pin-head in size, rapidly growing to small pea-sized, the pinkish or reddish peripheral portion of the macule or spot usually measurably or completely subsiding during the vesicular evolution. New lesions continue in an ill-defined,

crop like manner, or irregularly, several or more at a time for twenty-four to forty-eight hours and sometimes longer."

"As a rule, the individual lesions reach full development in from several hours to one or two days, by which time desiccation has already set in, drying to thin, film like crusts.

Subjective symptoms are rarely complained of, but occasionally there is itching and in extensive cases some tenderness. The eruption is commonly scanty and chiefly seated upon the trunk, more numerous upon the back; the scalp also generally shows some but the face and extremities relatively few. The process is as a rule ended and the crusts fallen off in from seven to twelve days after the inception of the disease."

We have quoted extensively above from an unusually full description of varicella in order to emphasize the points which follow.

Infants from one to five years have a passive resistance; from five years to adolescence the resistance is active; not sufficient to prevent but enough to modify both subjective and objective symptoms; from adolescence to old age, in those who have not had the disease, apparently all resistance is lost to such an extent that all the symptoms are magnified many, many fold. So evident is this that the prodrom in a middle-aged person is often so severe that it cannot be differentiated from that of variola. Schamberg remarks that "high fever, intense backache, repeated vomiting and prostration are absent in chicken-pox,"⁸ but with the exception of repeated vomiting all the symptoms have been observed in chicken-pox. No one seems to emphasize this point, Somerset⁹ merely saying, "In adults, during the last day or two of the incubation period, but no longer, fever with headache or backache or both may be present." However, the continuance of fever for a day or two after the appearance of the rash would be regarded by us as supportive evidence that the case is one of chicken-pox, though we feel that the diagnosis must in every case be based solely on the exanthem. This is also Somerset's conclusion.⁹

In the distribution of lesions a marked difference will be observed in the adult. While it is unusual to find many lesions upon the face of the active resistant child, quite the reverse is true in the adult; often the face, as in variola, carries quite as many lesions as other portions of the body. Even the palmar and plantar surfaces may have their quota.

A markedly different appearance will be observed between the lesions occurring on the face and extremities and those found on the trunk. Frequently you cannot find a typical lesion until you examine the trunk. Welsh and Schamberg mention that they have noted

this difference, having found hard, papular lesions on the face and extremities.

The cases observed by the St. Louis Health Department have shown this atypical varicellous lesion. In fact, so marked has this condition been that strict orders are issued forbidding the final diagnosis unless the patient is stripped. The varicellous patient will of course show entirely different types of lesions on the trunk, thus easily establishing the diagnosis between varicella and variola. It must always be borne in mind, however, that the lesions of varicella are at all times multiform, while those of variola are uniform.

The purpose of this paper has been to point out:

First, that varicella is not a rarity in adults.

Second, that the prodromata in adults are severe and often indistinguishable from those of variola.

Third, that in the adult the lesions of varicella are often well marked on the face and extremities.

Fourth, that the lesions on the face and extremities are easily confused with those of smallpox.

Fifth, that the diagnosis is relatively easy if attention is paid only to the exanthem, as it appears on the trunk, and the multiform nature of the lesions of varicella is always borne in mind.

Wall Building.

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THE COMMONER OBSTETRICAL MISTAKES

W. C. GAYLER, M.D.

ST. LOUIS

The practice of obstetrics has undergone immense changes in the last few years. The cautious use of pituitary extract is now understood, Cesarean section has almost entirely supplanted other major operative procedures, and in some of the larger centers the highly specialized obstetrician has established himself. There still remains, however, very much room for improvement, and therefore some suggestions may be of value.

The commonest mistake is made by the man who does not see many obstetrical cases. He should not accept an obstetrical case unless he is in the habit of doing obstetrical work and is willing to submit cheerfully to the delays and vexations that come to every obstetrician.

The *occasional* obstetrician often does himself and the patient an injustice. The practice of obstetrics calls for a large clinical experience and continued practice.

Internal examinations made by a nurse, in order to delay calling the doctor as long as possible, are a grave menace, and must not be tolerated. Internal examinations are extremely unfortunate necessities, and their number must be kept down as much as possible.

The use of pituitary preparations has revolutionized the practice of obstetrics, but they have too frequently been improperly used. They must not be used without strict therapeutic indications, and their use as a convenience to the doctor must be prohibited. We still have many normal, spontaneous deliveries that do not need any acceleration, even though it costs the doctor an extra hour or two of his time. While post-mortem hemorrhages seem to have become less frequent, injuries to the cervix have probably become more common since the pituitary extract became popular.

No woman should be permitted to enter labor before the obstetrician has a complete knowledge of (1) the fetal position, (2) the measurement of the bony pelvis, (3) the nature of the soft parts.

(1) A breech presentation can usually be corrected if the condition is recognized and external version attempted some weeks before labor. An impacted, transverse position usually occurs in a neglected woman. (2) Every pelvis should be examined and measured during the first examination, particular attention being paid to the true conjugate diameter. (3) A familiarity with the cervix and vaginal outlet is of importance. The long, narrow, developmentally-deficient cervix dilates slowly and usually tears during delivery. A knowledge of the relaxability of the perineum is very desirable.

The woman who has a narrow pelvis, or other possible obstruction to delivery, is entitled to *early* consultation. The call for help after a long period of labor and after forceps have been attempted is a mistake in technic. It is not at all necessary that every obstetrician be able to do a Cæsarian section, but it is very necessary that he should know in advance that trouble is coming. A distinctly narrow pelvis calls for early consultation and delivery in a hospital.

The obstetrician should remain in contact with his patient till involution of the genitalia is complete. Six to eight weeks after delivery all patients should be examined to determine (1) if involution is complete; (2) if position of uterus is correct; (3) if all stitches have held; (4) if cervical injury has been severe enough to interfere with function, and (5) to

determine the condition of the veins of the genitalia, the anus and the lower extremities.

Wall Bldg.

GONORRHEA IN THE FEMALE

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ST. LOUIS

Gonorrhea is often enough neglected in men but much more often in women. Since the subjective symptoms are often comparatively mild in women, who on the whole are less informed than men, they often look upon it as merely an aggravation of an existing leukorrhea and do not present themselves for treatment. A feeling of modesty if not remorse deters many others. However, even when they do present themselves for treatment the matter is apt to be disposed of by merely prescribing a douche of some kind to check the discharge. When we stop to think of the far-reaching, direful results of such neglect it is time we gave the subject the painstaking attention it deserves. It is true that some cases get along quite well without any treatment whatever and that a small percentage will not be cured by the most painstaking care, but these are not valid reasons for neglecting all cases.

Diagnosis.—This is ordinarily easy in an acute case. We must however remember that an acute vaginitis may be caused by other agents—chemical, physical and biological, singly or combined—which may puzzle even an expert for a time. However, the course of the disease, supplemented by the use of the microscope, will usually clear up the matter within a few days. The diagnosis of the more chronic cases is often exceedingly difficult. The peculiar granular appearance of the vulvar mucosa, the reddened points locating the orifices of the ducts of Bartholin's glands and of Skene's ducts, as well as the endocervicitis with its plug of glary mucus, especially in nullipara, are more or less characteristic. If we can demonstrate the gonococcus, of course the diagnosis is made. Smears should be made from the meatus, the ducts of Bartholin's glands and the depths of the cervix after wiping away the excess of secretion. If we can thus demonstrate the gonococcus, well and good; if unsuccessful, repeated attempts should be made. *Negative smears prove nothing.*

A word of caution is in place here. While there is nothing more typical than the characteristic intracellular grouping of a bunch of gonococci, this picture is not frequently found in chronic cases. The finding of a few intracellular diplococci does not prove gonorrhea,

as the diplococcus catarrhalis frequently appears as an intracellular organism. Gram's stain is of doubtful aid, as both are Gram negative, and besides it appears that, while ordinarily non-pathogenic, this organism may give rise to quite a severe vaginitis, at any rate in children. The only positive way to differentiate these two organisms is by culture. The complement fixation test thus far has not proven infallible to say the least.

Puerperal fever of gonorrheal origin usually manifests itself from eight to ten days post partum, while septic infections become evident as a rule on the third or fourth day, the former usually being less violent. This is an important point in differential diagnosis.

Treatment.—The one best remedy for acute gonorrhea is rest in bed. If that is impossible it should be approached as nearly as possible. Next to this, the excess of gonococci must be destroyed to aid nature in her efforts to overcome the infection, and at the same time the excoriating discharge must be frequently removed. This is accomplished in the vagina by frequent douches, and in the urethra by copious draughts of water. Finally, in chronic cases the offender must be pursued to his lair and either removed or destroyed there. As in the treatment of skin diseases, it is of the utmost importance, when dealing with inflamed mucosa, to know just when to soothe and when to stimulate. Too vigorous treatment at the wrong time may aggravate the condition, cause its extension, and keep up a discharge indefinitely.

In the presence of *vaginitis* douches should be begun at once. For this there is nothing better than permanganate, from two to ten grains to the quart of lukewarm water. The douches are administered from three to four times in twenty-four hours, the patient lying on a douche-pan, care being taken, especially in parous women, not to raise the douche-can higher than is absolutely necessary. Too much pressure will force the infection not only into the uterus but even through the tubes. If permanganate solution is too irritating, argyrol, boric acid or even normal saline solution, may be used for a few days. After the acute symptoms have subsided, aluminum acetate, a level teaspoonful to one-half gallon of hot water, is substituted. This has the advantage of allaying congestion as well as drying up the secretions. In the presence of ascending infection, the amount of water may be increased to a gallon or more, to get the benefit of the prolonged application of heat. An uncomplicated vaginitis usually clears up promptly. Chronic inflammation, which is usually most evident on and in the cervix, may be treated by one or more applications of 10 per cent. silver nitrate

in addition to the douche. If repeated, intervals of four or five days should intervene.

Vaginitis in children is most satisfactorily treated by keeping the patient in bed on a bland diet and having the nurse instil 10 per cent. argyrol solution into the vagina every three to six hours by means of a medicine dropper.

In those unusual cases where there is no vaginitis, douches are dispensed with for obvious reasons. Argyrol or weak silver nitrate solution is used locally, the parts are frequently washed with plain water and, if excoriated, dusted with zinc stearate or similar powder.

Acute *urethritis* is treated very much as in the male. Potassium acetate in 20 gr. doses, with or without fl. ext. triticum and hyoscyamus, later oil of sandalwood, are administered for the tenesmus. Hexamethylamine is of no value. If persistent, instillations of 10 per cent. argyrol or, later, one to three per cent. silver nitrate solutions, are made; the former once or oftener daily, the latter every two or three days. One or two per cent. silver nitrate ointment in a base of equal parts of lanolin and petrolatum, as recommended by Gellhorn, is useful as its action is more prolonged. In chronic cases the urethra is examined by means of the endoscope or female urethroscope. Skene's ducts, if involved, are injected by means of a glass syringe, using a needle the point of which has been dulled. If this is not effective, the ducts may be cauterized by means of silver nitrate fused on a fine probe. Fulguration and the actual cautery have been recommended. Strictures are diagnosed and treated as in the male.

Bartholin's glands are one of the most persistent sources of re-infection. The only certain cure for palpably infected glands is their removal.

Persistent *endocervicitis* is one of the most troublesome complications. Cauterization by all conceivable methods has been advocated but the application of silver nitrate, in the strength of from 10 to 25 per cent., seems most useful. This may be repeated once or twice a week. Hot douches are used at the same time.

Acute *salpingitis* very frequently subsides under appropriate treatment. This consists of, first, rest in bed for from four to eight weeks; second, heat applied to the abdomen, preferably by means of electric light baths; third, prolonged *hot* douches. Pregnancy may take place after double salpingitis. The treatment of chronic salpingitis is surgical. Whether only the tubes or both uterus and tubes should be removed depends on the individual case and the judgment of the operator.

Finally, to cure a gonorrhea, it is necessary

to clean up *every* focus of infection. This requires care, time, skill and patience.

626 Metropolitan Bldg.

REDUCING THE DANGERS IN TONSIL OPERATIONS TO A MINIMUM*

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During the last ten years tonsil surgery has become standardized, like many other operations, and it is possible that the future may bring even better results by some improved surgical technique. There is danger, however, even in such a minor operation as enucleation of the tonsils, and it is not infrequent to read of deaths from this operation, either while the operation is proceeding or afterwards—sometimes many weeks, as in cases of lung abscess. The operation is not devoid of danger, even in the most skilled hands and when one considers that the operation is often done by untrained surgeons who never think of making a physical examination and who in many cases operate without a good history of the case, it is astonishing that more deaths do not occur.

In order to make the operation practically free from danger, the operator must take into consideration many things before proceeding.

In the first place, the tonsillectomy should not be performed unless the patient is in good physical condition at the time. Particular attention should be paid to the chest and kidneys. A patient should have a physical examination to ascertain the condition of the lungs and heart, as from this we can determine whether an operation can be undertaken or not, also the kind of anesthetic to be used and whether there is a probability of lung abscess following operative procedure.

Should the findings in the chest show that the patient has a heart lesion, the question arises whether there is compensation or not. If there are no general symptoms, then the question must be considered as to what kind of an anesthetic is the safest under the circumstances. My rule is never to use chloroform except in rare instances, which I will state later.

The next question is whether ether or gas is the best anesthetic in these cases. Personally, I have operated a large number of patients who had a heart lesion and used gas in nearly all without any mishaps, and while I have operated upon a few with ether with safety I would certainly recommend gas-oxygen as much safer, especially in children.

Of late I have been using "cotton process ether" in my tonsil work and find it very satisfactory for adults. The disadvantage in this ether is that it is not practical for children, unless it is carried to the full anesthesia. I am satisfied it is even more safe than nitrous-oxid, but it requires fast operating, as the patients regain consciousness as rapidly as they do in nitrous-oxid anesthesia. In many cases the mouth-gag can be dispensed with, which makes the operation much easier. Of course this ether cannot be used in the analgesic stage with a snare operation. I am speaking now of using this method of anesthesia with the Sluder instrument. I also wish to state that it should never be used in hysterical individuals, unless one intends to carry them farther than the analgesic stage.

The claim is made by the manufacturer of this ether that it is safer than any other. The great advantage I have found in using it in the analgesic stage is that the patients do not have much nausea or vomiting. Of course the operator must allow the patient to sit up immediately after the tonsils are removed, allowing him to expectorate the blood—otherwise, regardless of the anesthetic used, the patient will become nauseated.

Another condition noted after using cotton process ether is that I did not find the severe headaches that are frequent after ether and nitrous-oxid anesthesia. Many patients are able to walk from the operating room unassisted. In patients who have chronic bronchitis or any lung condition, the kind of anesthetic to be used is very important, and I would not use ether in any case, but nitrous-oxid. Should it not be available, and the patient's heart and circulation be abnormal, then "cotton process ether" should be used in the analgesic stage in adults and to complete narcosis in children. The claim is made for it that it is not depressing on the heart and is not irritating to the respiratory tract.

In lung cases except asthmatics, where the heart is normal and where "cotton process ether" is not available, I would use chloroform in the form of a Rauch, but the operator must be just as rapid as if he were using gas or "cotton process ether." In enlarged bronchial glands without an enlarged thymus, in children who at the time of the operation are not showing symptoms of bronchitis, I think gas or "cotton process anesthesia" should be used. Should there be an enlarged thymus (and in this case the diagnosis is made by percussion and fluoroscopic examination) and also enlarged bronchial and cervical glands, unless it is an urgent case, the operation should be postponed and medicinal treatment instituted for an indefinite period, as an operation in such cases is dangerous. In

*Read before the Southeast Missouri Med. Assn., Jackson, Mo., October, 1920.

chronic bronchitis in children otherwise healthy, gas-oxygen should be the anesthetic of choice. The only exception to the above would be for fat children or adults with short thick necks, and this point was given the profession by Tetter himself, a pioneer in gas anesthesia.

An examination of the urine should be made in all cases of acute and even chronic tonsillitis and an operation should not be performed until the urine becomes normal, except in those cases that resist treatment and when the focus of the infection is fairly positive in the diseased tonsil.

I think in the above class of cases, the gas oxygen anesthesia is the safest, but should this not be available, chloroform can be used, provided the heart is normal.

There is one class of children where gas should be used in preference to all other anesthetics, and that is in asthmatic, spasmophilics and children suffering from exudative diathesis. Frequently, asthmatic children are subject to exudative diathesis, and we often find an enlarged thymus, large bronchial glands, eczema and recurrent urticaria common in the same individual.

While asthmatic patients should have their tonsils and adenoids removed when indicated, the operator should be cautious about promising a cure in these cases, as many of them are due to irritation elsewhere, and frequently are sensitized to some food, pollen or bacteria which causes the attack. These are the dangerous cases for operation, and I would advise a careful examination of the heart and a fluoroscopic examination of the chest, and if an enlarged thymus gland is found without enlarged bronchial or cervical glands, it is better to make a two-stage operation with nitrous oxid as the anesthetic (never chloroform), first removing the adenoid with just enough gas to enable the operator to work as rapidly as possible and after an interval of four weeks remove the tonsils.

In doing tonsil work the position of the patient should be the recumbent one with the head upon a level with the shoulders, and after the tonsils are removed, it is a good plan to use tampons held in the tonsil fossæ, turning the patient's head and shoulder quickly, so that the blood and infectious material will not be aspirated into the lungs with a possible chance of a lung abscess. Statistics show that at least 50 per cent. of lung abscesses are the result of operations upon the nose and throat, and I am satisfied that if rapid work is done and the above rule is adopted, lung abscesses from tonsil and adenoid work will be reduced considerably. Another point is that the anesthetic, regardless of what kind is used, should

not be carried far enough to completely abolish the reflexes of the pharynx.

Lessening the Dangers from Hemorrhage.—Every operator doing tonsil work occasionally has a severe and alarming hemorrhage, and there are a few points which the operator must observe before, during, and after the operation in order to reduce the dangers to a minimum. The first essential in order to prevent a severe hemorrhage is a careful history of the patient in regards to bleeding from trivial injuries and the history of bleeders in the family. Another fairly accurate guide in preventing hemorrhage is to determine the clotting time of the blood, and if clotting occurs in the usual time (four minutes), it is unnecessary to administer calcium lactate, gelatin, etc., several days before the operation.

Hemorrhage During Operation.—Many operators are not equipped to control bleeding, with a result that many patients are exsanguinated before the hemorrhage is controlled. My advice to all tonsil operators is to have a good light, either direct or reflected, large powerful hemistats, some curved and some straight, so that you can take a good bite when the bleeding point is found. If the vessel is not easily seen, use a wad of gauze firmly wrapped into a ball and grasped in the center by a large artery forceps. This is held firmly in the tonsillar fossa by the assistant with his finger pressing inward and upward below the angle of the jaw for a minute or two; at the same time, the operator must be ready with an artery forceps with his light focused on the tonsillar fossa and the assistant quickly removing the gauze, the bleeding vessel can be secured. The above can be simplified by pulling the anterior pillar forward with a pillar retractor.

There is one vessel that gives considerable annoyance when cut, and that is the one that is situated at the bottom of the fossa and just behind the anterior pillar in close proximity to the side of the tongue. In these cases, it is sometimes necessary to take a small curved needle threaded with 10-day catgut and throw a ligature around the tissues in this region. This usually will suffice in stopping the hemorrhage. At other times, it is necessary to sew the pillars over a small piece of gauze which is inserted in the fossa. This can be done with a small curved needle and a pair of long-handled needle forceps. The sutures can be removed within 24 to 36 hours.

I would warn against removing the lymphoid tissue in the infratonsillar region. This is not tonsil tissue, but is a part of the lingual tonsil and sometimes spreads over the base of the tonsil fossa. Some operators include this in the tonsil operation, but as I said before, it is not necessary, as there are no

crypts in it and even if it takes on acute inflammation occasionally, it is usually mild and there is no danger of infection.

219-23 Metropolitan Bldg.

RELATION OF CONTACT WITH TUBERCLE BACILLUS TO DEVELOPMENT OF TUBERCULOSIS.—Experimental evidence obtained by J. B. Rogers, Cincinnati (*Journal A. M. A.*, Dec. 18, 1920), has shown that such objects as gauze used to cover the mouth when coughing, pillow cases used twenty-four hours, patients' hands, spoons used by patients, magazine covers picked up indiscriminately from the wards, and door-knobs frequently handled by patients are contaminated with living, virulent tubercle bacilli. Patients with open tuberculosis frequently emit infectious particles when coughing. If these particles are collected 15 inches from the mouth of the patients, 35 per cent. of a group of guinea pigs can be infected; if collected at a distance of 6 inches, the percentage increases to 75 per cent. Such particles, no doubt, are inhaled by persons in close proximity to the patients. The saliva in open cases of tuberculosis usually contains living tubercle bacilli. The sedimented urine in twenty open pulmonary tuberculosis cases negative for genito-urinary tuberculosis failed to infect any of the twenty inoculated guinea pigs. Out of 240 nurses employed at the Cincinnati Tuberculosis Sanatorium, only three developed tuberculosis, and one diagnosed as tuberculous after working at the sanatorium for two years gave a history of previous infection.

HOOKWORM AND OTHER INTESTINAL PARASITES IN ECUADOR.—Hookworm disease, E. Ray Royer, Guayaquil, Ecuador (*Journal A. M. A.*, Dec. 18, 1920) is very prevalent in Ecuador. *Trichocephalus dispar* and *Ascaris lumbricoides* are found in a large percentage of the population, and diarrhea and subsequent anemia are not unusual sequelae of these parasites. Chenopodium oil has proved more effectual in the removal of intestinal parasites, with the exception of *Trichocephalus dispar* and the tapeworm family than the older vermifuges. The former has been found more resistant to treatment than other species, and neither chenopodium nor other vermifuges or anthelmintics seem to exert a marked influence on their removal or destruction. A classical symptom often mentioned in textbooks as occurring in hookworm disease, i. e., a triangular spot, or spots, on the dorsum of the tongue, appearing as though a pen had been wiped on it, Royer says, is of little value as a diagnostic sign. In the series of cases reported, this sign was not observed in a single instance. An interesting feature, and perhaps an unusual one, was the fact that while the initial survey of employees revealed an average infestation of 58.66 per cent. with hookworm, in forty-six cases of pulmonary tuberculosis, hookworm infestation could not in a single instance be demonstrated, though the pulmonary condition apparently exerted little influence on other species of parasites, which were present in about the usual number.

PARAFFINOMA AND WAX CANCER.—Benjamin Franklin Davis, Duluth, Minn. (*Journal A. M. A.*, Dec. 18, 1920) cites the case of a woman who had two small moles of approximately symmetrical location on each cheek. These had been removed by electrolysis, leaving small, depressed scars. Paraffin had then been injected to fill out the depressions; the immediate results were so pleasing that several small wrinkles on each cheek had also been filled

out at subsequent sittings. In about a year the site of these injections became slightly swollen, indurated, and assumed a dusky red color. The induration and discoloration gradually spread to involve the greater part of each cheek. At frequent intervals the lesions became the seat of mild suppurative processes associated with the extrusion of minute particles resembling paraffin; these would leave small ulcers which would crust over, heal, and again break down, so that there was an almost constant discharge from areas involved. The treatment adopted was complete excision of involved tissue and substitution of a flap of skin and fat from the arm, one side at a time. This involved four different operations. The result, eight months after operation, was a decided success.

TREATMENT FOR COLIC IN BREAST-FED INFANTS.—Morning and evening, C. G. Grulee, Chicago (*Journal A. M. A.*, Dec. 18, 1920), gives these breast-fed infants about 5 c.c. of the liquid culture of active lactic acid bacilli, and each breast feeding is preceded with 1 gm. of powdered casein. The ordinary casein of commerce is not to be used. Powdered casein is not soluble by ordinary means, hence it is necessary to make a paste and place this on the back of the infant's tongue. If it is impossible to obtain the powdered casein, one may carefully skim milk and take the curd of the milk. The quantity of curd to be used before each nursing is approximately that obtained from an ounce of skimmed milk. Grulee says it is unusual for a case of colic to resist this treatment for longer than a week or ten days, and usually the benefit begins to appear within from twenty-four to forty-eight hours.

THERAPY OF CATARRHAL FEVERS.—To draw a sharp distinction between influenza, grip and "colds," Bernard Fantus, Chicago (*Journal A. M. A.*, Dec. 18, 1920), says is futile; hence the term "catarrhal fevers" is advocated to embrace the whole group. Even a mild case of catarrhal fever requires absolute bed treatment, continued until the patient has been well for several days. "Coddling" is the rule of safety in catarrhal fever; "hardening," in its prophylaxis. With the possible exception of alkalis, the use of medicines is merely symptomatic. Routine antipyresis is a mistake, though the sparing initial use of a few small doses of members of the antipyrin or salicylate group as analgesics may do no harm. Opiates to check cough should be used most exceptionally only in catarrhal fever. The indication is to favor expectoration, as by saline expectorants and by fluid.

ABSCESS OF SPLEEN.—Elliott C. Cutler, Boston (*Journal A. M. A.*, Dec. 18, 1920), reports a case of abscess of the spleen following an acute bilateral otitis media in which recovery followed drainage of the infected region. The spleen substance had given way, extensive adhesions had formed so that splenectomy was not possible. The infection extended into the left chest.

LABORATORY PROBLEMS OF BLOOD TRANSFUSION.—The study of isohemagglutination and isohemolysis has done much, Howard T. Karsner, Cleveland (*Journal A. M. A.*, Jan. 8, 1921), says toward making the operation of transfusion relatively safe; but the problem of reaction is by no means completely solved. Extensive and intensive study of immunologic problems from the point of view not simply of immune substances as we understand them today, but from the broader view of physical chemistry, are necessary before we can place the operation on a thoroughly satisfactory basis.

THE JOURNAL

OF THE

Missouri State Medical Association

MARCH, 1921.

EDITORIALS

POSTGRADUATE MEDICAL STUDY

Almost within the memory of men still living, it was the custom for those who could afford the time and especially the money, to proceed to France from America for postgraduate medical work. In the days before the Franco-Prussian War, the vogue of the French school of medicine was highest in this country. After that disastrous war, German ascendancy rapidly established itself, and most of us today who are not too old or too young, remember distinctly our feeling that it was quite necessary for the recent graduate to voyage to Germany or Austria to become a competent, well-informed physician, surgeon or specialist. These educational voyages were undoubtedly of great value. Men brought back a certain atmosphere of culture and a certain degree of information which has helped the advancement of medical education in this country. It is probably true that a good many youths spent more time in the very pleasant occupation of beer drinking and looking at scenery and art galleries than they did in the laboratory or the ward. Nevertheless, the influence on the whole of the postgraduate work so energetically fostered by the German universities was for the improvement of medicine in this country.

Since the Great War, it has dawned upon those interested in medical education that we have in this country adequate clinical material, adequate laboratories, and a sufficient teaching force to meet the needs of postgraduate medical instruction.

The attention of our better medical school faculties has been called to this need by the Council on Medical Education of the American Medical Association.

Washington University School of Medicine has made an effort to supply such courses in medicine, surgery and the specialties as will be of value to the practitioner of medicine in Missouri and the neighboring states. The faculty of Washington University School of Medicine feels that in arranging these courses, it is doing so in answer to a definite demand for postgraduate medical instruction. An announcement of these courses has been recently sent to every member of the Missouri State

Medical Association. The courses outlined in this announcement cover in particular the need of supplying instruction to those who wish to spend from four to twelve weeks in brushing up on clinical or laboratory methods in order to keep abreast of the time and to maintain a high degree of personal professional efficiency. The courses will utilize all the teaching facilities at the disposal of Washington University School of Medicine, the various laboratories of Barnes Hospital, Washington University Dispensary, St. Louis Children's Hospital, City Hospital No. 2, Jewish Hospital, and the library and reading room of Washington University School of Medicine.

It seems that such instruction as this established in our own state should call for the active co-operation of the organized medical profession of the state. It gives to the medical profession opportunities which it has been in the habit of availing itself of by long journeys to distant parts of this country or Europe. Those interested in the development of postgraduate medical instruction sincerely hope that the first year of this work will show a convincing response as to the necessity of carrying it on in the future.

IN MEMORIAM—HOUSE BILL NO. 279.

Wonders will never cease, states the ancient maxim, and by the same token we surmise that absurdities will also continue. We are therefore pleased to record that House Bill No. 279, introduced by Mr. Stevens, of St. Louis County, at the fifty-first General Assembly of the Missouri Legislature, has met with a merited demise. This measure made it compulsory to obtain a physician's prescription when purchasing a patent medicine or drug at the pharmacist, and seems to have been conceived in an atmosphere of secrecy. At any rate, the physicians of Missouri were not aware of its impending birth, else it would have died prenatally.

The average lay mind is not given much to analyzing, particularly to analyzing governmental affairs; matters in these lines are grasped usually for what they seem to be worth on the surface. It is not difficult therefore to surmise that the public might have accredited this vicious bill to the medical profession thereby hurling an unmerited castigation at the physicians of Missouri. There are a great many matters transpiring in legislative halls during general sessions and caucusses which tax the ingenuity of the most potent psychologists without a successful analysis, unless it be the meaningless cognomen—politics. This bill is a sample of legislation that is calculated to stimulate one's risibles on first analysis, but

becomes a source of great concern when carefully reviewed in the prospective.

It is a forceful reminder of the stern necessity confronting the medical profession, who strive conscientiously to avoid the paths that lead toward class legislation, of exercising eternal vigilance to avoid becoming the scapegoat for someone's personal ambition or desire to draw personal attention. Such persons are blind to all the dictates of common sense and often foster measures of pathetic absurdity. One can only surmise that the originators of such an obviously thoughtless bill as H. B. 279 must be bordering near the realms of neuropathology, to whom oppression of an already overburdened legislative body and the dignity of an honorable profession mean absolutely nothing. The legislators who were responsible for attaching a lilly to this measure are to be congratulated for their good judgment.

ALL HANDS TO THE WHEEL

The House Committee on Public Buildings and Grounds in Congress has favorably indorsed a bill which provides for the erection of five great hospitals, each to cost \$2,500,000 and to be conducted under the direction of the United States Public Health Service. We have the statement of Congressman Dyer that the committee had St. Louis in mind as the location for one of these hospitals, "to meet the needs of the Central Southwest States." A very significant remark also by Mr. Dyer is that "the proper effort of the people of St. Louis to locate this hospital there will probably be successful."

Up to the time of this writing, the only evidence of this "proper effort" has been manifested by the Junior Chamber of Commerce, an excellent progressive association of young business men in St. Louis. It is more than mere civic pride which prompts us to urge the medical profession of Missouri and all allied interests to join in a broad and concerted movement with the object of bringing this magnificent project to adorn the great metropolitan center of the United States.

As a suitable location for the above mentioned hospital, St. Louis has indeed an enviable landscape. One of the world's greatest seats of medical learning in conjunction with an immense hospital adorns the city. And if this were not sufficient, St. Louis could boast of a number of highly standardized hospitals renowned throughout the country for efficiency.

The question of "meeting the needs of the Southwest" is one hardly requiring discussion. St. Louis has for long been the acknowledged gateway for the southwestern section of the

country, with an increasing prestige each year. The increased interest being manifested by great industries who are seemingly looking toward St. Louis as a base for their activities is a sure sign of a bright development in the history of this city in the near future. There is a well grounded probability that the immense hospital for crippled children which is already in course of planning, may be landed in St. Louis. Many inviting factors could be cited which make of this city a logical and salient locality for the government hospital. Let all the interested factors get together for a grand community boost, so that the congressional committee may thereby be apprised of the fact that St. Louis not only desires to have this hospital, but that we mean to have it because we are justly entitled to the distinction.

NEWS NOTES

DR. W. E. HOLDENRIED, St. Louis, has practically recovered from a severe infection of his left hand and forearm contracted from a patient, but was compelled to sacrifice the left index finger.

DR. VICTOR C. VAUGHAN, for thirty years dean of the University of Michigan Medical School, has resigned. Dr. Vaughan has been professor of hygiene and physiological chemistry since 1884.

DR. PAUL V. WOOLLEY of Kansas City, secretary of the Jackson County Medical Society, has been appointed Police Surgeon of Kansas City to succeed Dr. Chas. R. Revelle who resigned the position.

DR. H. P. BEIRNE, Councilor of the Illinois State Medical Society at Quincy, has in cooperation with several other physicians opened the Beirne Radium Institute, which will limit its work to the field of radium therapy.

MME. MARIE CURIE has been invited to visit the United States and expects to come in May. Committees of reception have been appointed, including in their membership leading men of science. It is planned to present to Mme. Curie a gram of radium.

DR. B. A. WILKES of St. Louis has been elected superintendent of the Missouri Baptist Sanatorium in St. Louis to succeed the late Mr. J. S. Whaton. Dr. Wilkes was formerly superintendent of the same institution resigning in 1900 to enter private practice.

DR. EMMETT P. NORTH, a member of the Missouri State Board of Health, was elected president of that body at the annual meeting of the board in January. Dr. North has the distinction of holding the presidency of the St. Louis Society and the Missouri State Board of Health concurrently.

At the meeting of the staff of the Missouri Baptist Sanitarium, St. Louis, November 8, 1920, a resolution was adopted declaring the staff of the Sanitarium was absolutely opposed to the division of fees in any form whatsoever, and recommending to the board of directors that the use and benefits of the Missouri Baptist Sanitarium be denied to any physician or surgeon known to practice "fee splitting."

During January the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Calco Chemical Co.: Cinchophen Tablets.

Hynson, Westcott & Dunning: Globules of Benzyl Benzoate.

Heyl Laboratories: Acriflavine, Proflavine.

Intra Products Co.: Calcium Cacodylate—IPCO.

Winthrop Chemical Co.: Salophen.

Morgenstern & Co.: Salophen.

THE Physicians' Radium Association of Quincy was incorporated recently at Quincy, Illinois, with a charter sufficiently elastic to permit the erection and maintenance of a hospital, adapted primarily for the use of radium as a remedial measure. Dr. Harold Swanberg was elected managing director, and a large number of physicians of Quincy have become shareholders in the corporation. The purpose of the association is to make available a larger fund for the purchase of radium than would be possible by individual physicians.

THE testimonial dinner, in honor of Dr. W. A. McAlester of Columbia, in celebration of his eightieth birthday, given at the Daniel Boone Tavern at Columbia on February 15, was attended by over three hundred friends and relatives of Dr. McAlester. Dr. A. R. McComas of Sturgeon presided and toasts were given by the following:

"Dr. McAlester and University Medical Education," by Dr. A. Ross Hill.

"Dr. McAlester a Sportsman," by Dr. Jabez N. Jackson.

"Dr. McAlester the Man," by Mr. H. J. Waters.

Presentation of Scroll by Dr. C. M. Sneed.

These toasts were followed by impromptu talks from a number of guests. We hope to publish a full account of the occasion in our next issue.

DR. PHILIP SKRAINKA of St. Louis has accepted a position with the American Institute of Medicine of New York, as supervising editor, and left St. Louis for his new home February 1. The Institute was created with the view of assisting the busy physician in his attempt to keep in touch with the medical and surgical activities of the world. An advisory council is composed of more than forty well-known physicians, among whom we observe the name of Dr. M. G. Seelig of St. Louis. A staff of more than thirty reviewers, translators, abstracters, editors, investigators, research workers and practicing physicians collect and distribute all kinds of medical information; read, index and abstract the current medical literature; does research work, makes investigations, prepares reports, and performs a large variety of special service for physicians who are members of the Institute.

Dr. Skrainka's well-known literary attainments, and experience in medical journal work, make him an eminently fit person to fulfill the duties of the work he has undertaken.

At the January meeting of the State Board of Health the following applicants passed the examination for licenses to practice medicine:

Baepler, Hugo Louis, St. Louis.

Barnett, Spurgeon H., Warren, Arkansas.

Bohne, Wm. Ranke, Ft. Wayne, Indiana.

Cheney, Ralph Edwin, Typsum, Kansas.

Clifford, Francis C., Toledo, Ohio.

Coyle, James David, St. Louis.

Draper, David Burris, St. Louis.

Fuerste, Frederick, St. Louis.

Gaebe, Harold Carl, St. Louis.

German, Walter Abel, St. Louis.

Hanser, Otto C., St. Louis.

Kramer, Arthur Elmer, Emden, Illinois.

Lueking, Tremont, St. Louis.

Mason, Roy Carl, St. Louis.

Motzel, Albert Joseph, St. Louis.

Ochsner, Edw. Wm. Alton, St. Louis.

O'Malley, Eugene John, St. Louis.

Rudolph, Royal Wm., S. Dakota.

Rumreich, Adolph S., St. Louis.

Phillips, Jasper Tappan, Nashville, Tennessee.

Porrazzo, Andrew Paul, St. Louis.

Tremain, Ernest Ellwood, St. Louis.

Vogler, Alfred Theodore, St. Louis.

The following licenses were granted by reciprocity:

Atchley, Roger Q., Ohio.

Bennett, Chas. Clifford, Kansas.

Burrows, Montrose T., Maryland.

Charles, Hugh Lester, Kansas.
 Chesney, Alan Mason, Maryland.
 Hogeboom, Geo. Washington, Illinois.
 Lissack, Ed. H. Max, Nebraska.

A CLINIC was given by the staff of St. John's Hospital of Joplin, Missouri, at the hospital February 17. There were over a hundred visiting physicians from the surrounding territory including Arkansas, Oklahoma, Kansas and Missouri. The clinic started at nine in the morning and ran until late in the evening. There were twenty major operations and several minor ones as well as some interesting medical work on the program.

The operations included abdominal, bone, genitourinary and throat work; the medical clinic included hyperthyroidism, myelogenous leukemia, laboratory demonstrations, and gastric ulcer with demonstrations of fractional analysis.

Lunch and dinner were served by the staff of the hospital. The staff of St. John's Hospital, appointed last fall, consists of:

Dr. S. A. Grantham, Chief of Staff; Dr. Jas. I. Tyree, Chief of Medical Staff; Dr. H. C. Powers, Secretary.

Medical: Balsley, C. M.; Chenoweth, L. C.; Dickerson, H. W.; Haratun, M. B.; James, R. M.; Mack, Mary L.; Sims, J. L.; Snyder, A. R.; Thornton, R. A.; Tyree, J. I.

Anesthetics: Leaming, H. A.; Mallory, W. H.; Coombs, M. O.

Pathology: Korn, A. L.

Sisters of Mercy, Governing Board.

Surgical: Chenoweth, J. A.; Grantham, S. A.; Gregg, A. M.; Miller, S. H.; Neff, R. L.; Powers, H. C.; Williams, J. B.

Eye, Ear, Nose, Throat: Shelton, M. C.; Pifer, J. D.

X-Ray: McGaughey, H. D.; Cummings, C. C.

Pediatrics: Moody, E. E.; James, E. D.

MEMBERSHIP CHANGES, FEBRUARY

NEW MEMBERS

Adkins, Albert E., Richmond.
 Bryd, Ritchie Lilburn, 6104 N. Broadway, St. Louis.

Carter, Wm. Stokely, Barnes Hospital, St. Louis.

Copeland, Carlos, Monett.

Cowan, R. D., Greenfield.

Davis, I. R., St. Charles.

Davis, Samuel S., Bloomfield.

Feller, C. E., 200 E. Commercial St. Springfield.

Field, Albert Conely, 5800 Arsenal St., St. Louis.

Hartley, W. E., Sedalia.

Krebs, Otto St. Clair, Barnes Hospital, St. Louis.

McCarty, James Wade, Lenox.

Persons, Robert C., Maryville.

Ricks, Geo. Newton, 6201 Etzel Ave., St. Louis.

Wichman, August G., 3547 Wyoming St., St. Louis.

CHANGES OF ADDRESS

Atchley, R. Q., Lebanon, Mo., to 306 Bliss Bldg., Tulsa, Okla.

Baker, Clark E., St. Louis, Mo., to Rochester, Minn.

Baker, C. H., 2905 Cherokee St., to 3557 Sidney St., St. Louis.

Butler, Owen W., 3901 Woodland Ave., Kansas City, to 3700 Benton Blvd.

Butterfield, E. R., 1218 Clara Ave., St. Louis, to 3949b Magnolia Ave.

Craven, J. H., Joplin, to Carl Junction, Mo.

Earnest, Clarence E., Hyde Park Bldg., Kansas City, to 715 Bryant Bldg.

Edgel, O. K., Bowling Green, to Novinger, Mo.

Fair, Shields W., Belton, to Kansas City.

Fay, Harold W., 3904 Hartford St., St. Louis, Mo., to Dilley, Texas.

Funkhouser, Paul, 4354 Olive St., St. Louis, to Bellevue Hosp., New York City.

Gibbs, Charles A., Greenburg, to Vienna, Mo.

Hochdoerfer, Daniel F., 3858a Arsenal St., St. Louis, to 3100 S. Grand Ave.

Jones, Walter M., 5800 Arsenal St., St. Louis, to 3640 Marine Ave.

Koessel, Arthur W., 3444 S. Grand Ave., St. Louis, to 3717a McDonald Ave.

Lowenstein, Paul S., 603 Metropolitan Bldg., St. Louis, to The Mount Sinai Hosp., New York City.

McKittrick, Ora F., Colliers, W. Va., to Holliday's Cove.

Moore, C. A., Aurora, to 318 College St., Springfield.

Moore, Sherwood, 5858 Nina Pl., St. Louis, to 14 Thornby Pl.

Murphy, Ed. W., St. John's Hosp., St. Louis, to Humboldt Bldg.

Newman, Louis E., Humboldt Bldg., St. Louis, to 5381 Waterman Ave.

Patchin, Horace J., Wyaconda, Mo., to Ft. Madison, Ia.

Pelz, Mort D., St. Louis, Mo., to Warner Bldg., South Bend, Ind.

Roach, James F., St. Louis, Mo., to 1624 Milan, New Orleans, La.

Rose, Rose M., 5606a Easton Ave., St. Louis, to 5411 Easton Ave.

Sevin, O. R., Wichita, Kans., to 408 Humboldt Bldg., St. Louis, Mo.

Skrainka, Philip, St. Louis, to 13 E. 47th St., New York City.

Schnoebelen, Paul C., 923 Univ. Club Bldg., St. Louis, to Humboldt Bldg.

Van Raalte, Martin, 925 Arcade Bldg., St. Louis, to 4016a Chouteau Ave.

Wilson, G. Wheeler, St. Louis, to 421 College Ave., Mt. Vernon, Ind.

Wilkes, Benj. A., Los Angeles, Calif., to Mo. Baptist San., St. Louis.

Witter, Wm. L. M., LaGrange, Ill., to Milan, Mo.

NO LONGER MEMBERS IN GOOD STANDING

Acree, Nathan C., Myrtle, Mo.

Brewster, R. B., Kansas City, Mo.

Butzke, Ernest John, Address Unknown.

Gray, Isabel S., St. Louis, Mo.

Greene, A. F. M., Fergus Falls, Minn.

Irwin, Chas. B., Chicago, Ill.

Phillips, E. T., Kansas City, Mo.

Redwine, J. T., Cass City, Mich.

DECEASED

Rickhoff, A. H., Chamois, Mo.

Smith, J. C., St. Joseph, Mo.

OBITUARY

BYRON N. STEVENS, M.D.

Dr. Byron N. Stevens was born January 15, 1844, in the State of Maine. When four years of age he moved with his family to Rosedale, Wisconsin. In May, 1864, he enlisted as a private in the Union Army from Pennsylvania and was sent to Nashville, Tenn., where he served until peace was declared. He returned home and took up the study of medicine, graduating from Rush Medical College, Chicago, Ill., February 3, 1869. He came to Chillicothe, Mo., with his father and family in March, 1869. He opened an office in what is now known as the Wigley Building and had no other for fifty-two years, except temporarily while the building was being rebuilt. He died January 26, 1921, aged 77 years, 11 days. He took several postgraduate courses in New York and attended many sessions of the American Medical Association and Missouri State Medical meetings. He was a member of every Medical Society ever organized in his home city for the betterment of the regular profession, and had been a member of the Livingston County Medical Society, Missouri State Medical Association and American Medical Association since their organization. April 12, 1916, the Livingston County Medical Society elected him an honorary member for the remainder of his life.

Dr. Stevens was a man of unusual ability and steadfastness of purpose. He always stood for the best to be had in life. He was a great reader, both in medicine and general literature, to the day of his death. In 1875 he organized a reading club and for many years this club maintained a circulating library which was very beneficial in the betterment of the city.

The Livingston County Medical Society mourns its loss in his death.

J. C. SMITH, M.D.

WHEREAS, the members of the Buchanan County Medical Society have heard of the death of Dr. J. C. Smith at San Diego, Cal., on January 27, 1921, therefore,

Be it Resolved, That the Buchanan County Medical Society has heard with profound sorrow of the death of one of its old members, and the community has lost one of its valuable and patriotic citizens. He was born sixty-three years ago at Sparta, Buchanan County, was reared near Agency, and practiced medicine there, in association with one of our members, Dr. C. R. Woodson, and when the latter became superintendent at the hospital for the insane, Dr. Smith joined his staff, and remained in the employ of the state for more than twenty years.

Dr. Smith was of old Missouri pioneer stock, of a rugged physical constitution and for many years practiced in this county and here, if anywhere, he rose to the supreme test.

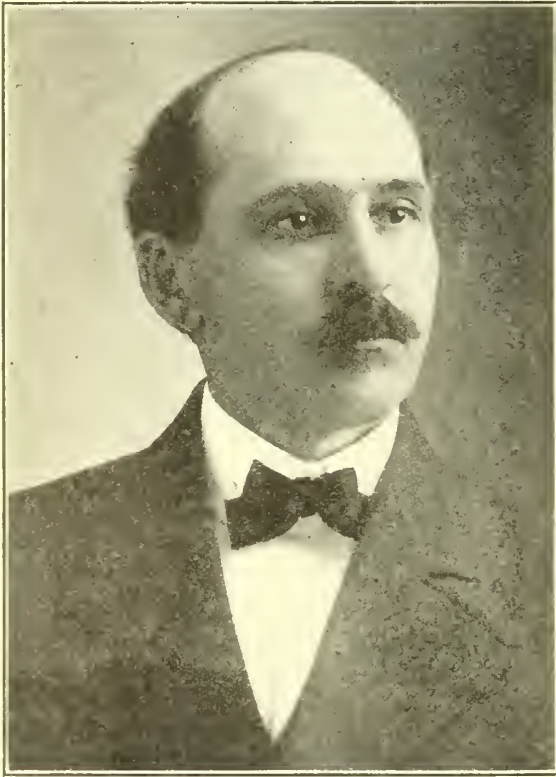
He was a faithful performer of his duties to the state, he had the highest conception of the relations of the doctor to the patient, and no patient ever charged him with negligence; his professional ability was always high. He was a man of studious habits, high ideals, and great enthusiasm. He was essentially a modest man, and never employed even the ordinary legitimate methods of self-advertising which are taught to count so much in professional success. His lovable disposition endeared him to every one, and his colleagues always found in him a helper and a friend. The medical profession shares the sorrow of his death, and heartily extends to his wife their deep sympathy.

"Well done, thou good and faithful servant."—*Bulletin Buchanan County Medical Society*.

ALGERNON S. BARNES, JR., M.D.

Dr. Algernon S. Barnes, Jr., of St. Louis, a graduate of the St. Louis College of Physicians and Surgeons, 1892, died at Albuquerque, New Mexico, November 27, 1920, from tuberculosis, aged 49 years. The son of Dr. Algernon S. Barnes, a distinguished physician

who lived and practiced in St. Louis, the junior Dr. Barnes successfully pursued his studies after graduation and devoted himself to diseases of the ear, nose and throat. Never of a robust constitution but full of nervous energy, he extended his efforts beyond the confines of practice and found many avenues through which to contribute his time and service toward encouraging improvements in the protection of the health of factory workers. For a number of years he was a member of the staff of the Factory Inspector at St. Louis, which gave him numerous opportunities for directing improved methods of guarding the physical welfare of the employees. Despite a growing evidence of serious throat affection that was undermining his constitution he refused for a long time to curtail his labors until he was finally compelled to seek the benefits of a milder climate. He was a member of the St. Louis Medical Society, the Missouri State Medical Association, and a Fellow of the American Medical Association.



FRANK DEVILBISS, M.D.

FRANK DEVILBISS, M.D.

Dr. Frank Devilbiss was born at Alexandria, Ohio, on September 12, 1859; died of pneumonia at Clyde, Kansas, December 20, 1920. He graduated from Missouri Medical

College in 1883 and practiced in Miller and Cole Counties, Missouri, for thirty-four years. He represented the twenty-seventh senatorial district in the Missouri Legislature from 1904 to 1908 and had charge of medical legislation in the State Senate during that time.

At one time he was vice president of the Missouri State Medical Association and was a regular attendant and faithful worker in the Association for many years. At the time of his death he was a member of the Kansas State Medical Society having resided and practiced at Clyde, Kansas, for a period of three years.

He was married to Margaret Pettigrew September 20, 1881. To this union five children were born, all living at the present time, Dr. Edgar Devilbiss of Kansas City, Missouri, Wyeth Devilbiss of Redding, Pennsylvania, Mildred Devilbiss of Clyde, Kansas, Laura Abernathy of Okmulgee, Oklahoma, and Hattie Garland of Oklahoma City, Oklahoma. Mrs. Devilbiss is still living at Clyde, Kansas.

R. SHEPARD BRYAN, M.D.

Dr. R. Shepard Bryan, of St. Louis, a graduate of the Washington University Medical School, 1897, died at his home December 7, 1920, after an illness of more than a year, aged 50 years. He practiced in St. Louis for a number of years after his graduation, serving in the medical clinic in the Washington University Medical School. During the war he was stationed at Honolulu, having the rank of Major in the Medical Reserve Corps, and later was stationed at Camp Kearney and Camp Lewis. He was a member of the St. Louis Medical Society and Missouri State Medical Association.

JOHN L. MCGHEE, M.D.

Dr. John L. McGhee, of Williamsville, Mo., a graduate of Washington University Medical School, 1889, died at his home October 28, 1920, aged 52 years. Soon after receiving his degree he located at Williamsville and ministered to the people in Wayne county during his entire professional life, never stinting comfort in answering the call of the sick, although his own health was impaired. He was a member of the Wayne County Medical Society which he served as president in 1919, and a member of the Missouri State Medical Association. The Wayne County Medical Society adopted the following resolutions at the meeting of November 9, 1920:

Whereas, the Great God of the universe has taken Dr. J. L. McGhee from our midst and from our society, and, whereas,

Through his death our Association has lost a worthy member and the community a merciful physician, therefore

Be it resolved that it is with sadness of heart that we note the death of Dr. J. L. McGhee and his absence from our meetings,

Be it further resolved, that we extend our sympathy to his family and relatives.

May he rest in peace.

DR. JOHN F. WAGNER,
DR. J. P. PRICE,
DR. J. P. SEBASTIAN.

GREGORY S. MILLER, M.D.

Dr. Gregory S. Miller, of St. Louis, a graduate of Washington University Medical School, 1888, died very suddenly at his home December 24, 1920, aged 45 years. Soon after his graduation he was appointed on the staff of the O'Fallon Dispensary and held that position until the dispensary was closed. He was specially interested in diseases of children. He was an earnest, conscientious physician of a retiring nature, loved and esteemed by all who knew him. He was a member of the St. Louis Medical Society and the Missouri State Medical Association.

JOSEPH J. HOUWINK, M.D.

Dr. Joseph J. Houwink, of St. Louis, a graduate of the University of Amsterdam, Holland, 1900, died suddenly at his home December 22, 1920, from apoplexy, aged 52 years. He came to St. Louis in 1902 where he practiced continuously until he died giving all his attention to diseases of the skin. He was instructor in dermatology in the St. Louis University School of Medicine, and for the past six years was Consul at St. Louis for his native land, the Netherlands. During the war he held the rank of Major in the Medical Corps of the Home Guards. Dr. Houwink was a man of very artistic taste, belonging to a number of associations in St. Louis for the furtherance of these ideas. He was a member of the St. Louis Medical Society, the Missouri State Medical Association, and a Fellow of the American Medical Association.

ANSELM C. ROBINSON, M.D.

Dr. A. C. Robinson, of St. Louis, a graduate of the Washington University School of Medicine, 1874, died suddenly in his office, January 12, 1921, aged 70 years. During his entire professional career he practiced in St. Louis where he was known and loved by hosts of people in all walks of life because of his genial good nature, his friendship for the struggling young physician, and his assistance to many unfortunates. He was physician to the Missouri Masonic Home, a position that he held for many years, and surgeon to the Police Department through numerous administrations. He served as a member of the St.

Louis Board of Health and in the early days of his practice he was city physician. He was a member of the St. Louis Medical Society and the Missouri State Medical Association.

FRANK RING, M.D.

Dr. Frank Ring, of St. Louis, a graduate of the St. Louis College of Physicians and Surgeons, 1892, died at St. John's Hospital, St. Louis, November 2, 1920, aged 65 years. He practiced in St. Louis during his entire medical life, and was professor of anatomy in the St. Louis College of Physicians and Surgeons in 1893-94, but gave all his time in later years to insurance work. He was a member of the St. Louis Medical Society and the Missouri State Medical Association.

HARRISON S. MARSH, M.D.

Dr. H. S. Marsh, of Kansas City, a graduate of the University of Missouri School of Medicine, 1908, died at the Bell Memorial Hospital, February 10, 1921, after an operation, aged 35 years. Dr. Marsh was a native of Missouri, born at Tipton where he practiced for several years before moving to Kansas City. He was recognized as one of the promising clinicians of that city, giving special attention to diseases of children. He was pediatricist to St. Anthony's Home for Infants and a member of the staff of the General Hospital. He was much interested in child welfare work and gave a large part of his time to the children's clinics of several charitable organizations. He was the son of Dr. J. W. Marsh of Tipton, a member of our Association. Dr. Harrison Marsh was a member of the Jackson County Medical Society and the Missouri State Medical Association.

MISCELLANY

DR. A. ROSS HILL RESIGNS PRESIDENCY OF STATE UNIVERSITY. WILL DIRECT FOREIGN OPERATIONS OF AMERICAN RED CROSS

From the American Red Cross *Bulletin* we take the following data concerning the new duties of Dr. Hill who has resigned the presidency of the State University to take up work in the Red Cross:

Dr. Albert Ross Hill, president of the University of Missouri since 1908, has accepted the vice chairmanship of the central committee of the American National Red Cross, to which he was elected at a recent special meeting of the committee. He will enter upon his Red Cross duties about March 1 and will be Director of Foreign Operations of the organization. Dr. Hill succeeds Frederick P. Keppel, who became Director of Foreign Operations when that position was created, following the change of the Red Cross organization from a war to a peace basis.

Under the adjustment plans adopted by the Central Committee, to meet the requirements of the permanent peace program of the Red Cross, two vice chairmen will have charge, respectively, of all domestic and all foreign operations, the election of W. Frank Persons, as vice chairman in charge of domestic operations, having been announced last week.

In announcing Dr. Hill's election to the members of the American Red Cross, the central committee desires to express its gratification in being able to secure an executive of his reputation and experience for so important a part of the Red Cross work.

Dr. Hill is a native of Nova Scotia. He received his A.B. degree from Dalhousie University in 1892 and Ph.D. degree from Cornell in 1895, after two years spent at the Universities of Berlin, Heidelberg and Strassburg. He subsequently received the LL.D. degree from various colleges and universities. He was Professor of Psychology and Education at the State Normal School at Oshkosh, Wis., from 1895 to 1897. The two years following he was Associate Professor of Philosophy at the University of Nebraska, becoming Professor of Philosophy and Director of the Psychological Laboratories at the same institution in 1898, and continuing in that chair until 1903, when he became Professor of Educational Psychology and Dean of Teachers' College, University of Missouri. In 1907-8 he was a member of the faculty of Cornell University, as Professor of Philosophy of Education, Director of the School of Education and later Dean of College of Arts and Sciences.

Dr. Hill is a member of the executive committee of the National Research Council, Division of Educational Relations; member of the Board of Visitors to the United States Naval Academy since 1917; a member of the Committee on Standards and Statistics, United States Chamber of Commerce; chairman of the advisory committee on Educational Research, Commonwealth Fund, New York City, and a member of the Committee on National University, of the National Association of State Universities. At different times he has been president of the National Association of State Universities, president of the Association of American Universities and president of the National Conference Committee on Standards in Colleges and Schools.

In order to become fully acquainted with details of the Red Cross work in Europe, Dr. Hill probably will go abroad in the near future. In Europe he will study the work of foreign relief organizations as well as that of the American Red Cross, and, if matters will permit of his leaving this country in time, he will attend the international conference called by the International Red Cross Committee, at Geneva, March 30.

NO TUBERCULOSIS SPECIFIC YET

Again a much-touted scientific sure cure for that most devastating of all diseases, tuberculosis, most commonly known in its pulmonary form as consumption, has been proved to be without genuine merit. So widespread and so insidious is this plague that there is a fertile field of both hope and credulity for the consumption curist to work upon. It has been shamelessly cultivated. The world is eagerly waiting for a specific that would arrest the progress of this malady and put an end to its ravages. It has had its hopes raised many times, only to be dashed to earth again. Yet these seasons of expectancy have not been unproductive of value, even in their disappointments. More has each time been learned about the disease and its nature and means by which it spreads and the methods best adapted to check its communication from one to another.

The present-day failure of a cure is that of Dr.

Friedrich Franz Friedman, also a German physician, who, just before the great war broke out, came to the United States to exploit an anti-tuberculosis turtle serum, which he claimed to be a sure destroyer of the tubercular germ in the human system. He was also received with great hope and large welcome, though the skeptical attitude of the medical fraternity was as usual. They required proof, in spite of the fact that at that time serums for germ diseases were almost a fad in medical science, many of which, however, have proved to be great boons to humanity, such as the anti-typhoid serum. He received great publicity and various institutions made long and careful tests of his remedy upon patients, following closely his directions, but with little success, and there was in the profession a general disbelief in the large efficacy of his remedy and his methods met with disfavor. He returned to Germany, asserting that the doctors in this country were jealous of him. During the war he was lost to view, but after the armistice, with his native country being swept with a plague of tuberculosis, the Prussian Government turned to him as a possible savior. He was given full charge of a hospital at a large salary paid by the state and given a free hand to show what he could do. His commercialism and low professional standards aroused such criticism that a commission of medical scientists was appointed to make a thorough investigation of both him and his remedy, and has just rendered a decision against both.

There is as yet no specific for cure of tuberculosis. Yet there are remedies, and especially remedial methods of treatment, resulting in cures. And there are especially preventive measures which check communication of the disease, which the various societies are striving to bring to popular knowledge and acceptance and to introduce into official health regulations. Just now another possible specific has appeared on the horizon. The same tropical oil which has for several years been experimented with in leper colonies and has been pronounced a genuine cure in many cases, is now being tested for tuberculosis, with preliminary favorable reports. It is nobody's special specific, and therefore we may expect no exploitation of it beyond the actual results gained by the medical specialists who are testing it. The world has not lost faith in a remedy yet to come.—*St. Louis Globe-Democrat*.

SOCIETY HANGS PORTRAIT OF DR. W. G. MOORE

A portrait of the late Dr. W. G. Moore of St. Louis was presented to the St. Louis Medical Society February 1. It was an occasion that served to recall the beautiful character of one of the most popular members of our Association during his life, as well as one of the most indefatigable workers in organized medicine, whose vision was ever forward-looking, and whose efforts always were toward advancement and improvement in the science as well as the art of healing. Dr. A. R. Kieffer made the presentation address which follows:

"It is with some concern that I accept the duty and responsibility of presenting, for his family, a painting of Dr. William G. Moore to the St. Louis Medical Society to be placed on the walls of our auditorium along with paintings of other distinguished deceased members.

"Dr. Moore was born in Kentucky, February 15, 1853. He was educated in the public schools of Kentucky and received his M.D. degree from the Jefferson Medical College in 1875. He spent nearly the whole of his professional life here in the city of St. Louis. He died January 28, 1915.

"It is fitting that his likeness should adorn these

walls. This was his professional home or headquarters. It was here he came to get and give inspiration and information upon all medical topics that he and his associates might be benefited and strengthened for greater efforts in alleviating the sufferings and diseases of their patients. Here it was we were accustomed to enjoy his best scientific and forensic efforts. He was devoted to science and art of medicine. He never tired of delving into the problems and mysteries of the former nor shirked the often onerous duties of practicing the latter among his patients.

"He was the idol of the medical profession of St. Louis and the state of Missouri; nor was an appreciation of his worth confined to the state of Missouri. We were furnished with a striking example of this several years before his death. Becoming convinced that the impertinence and persistency of the representatives of proprietary medicine concerns tended to lower the standard and commercialize the efforts of the practitioners of our profession, he, to correct the wrong, prepared and read a paper upon the subject at a meeting of the Missouri State Medical Association. The substance of the paper was embodied in resolutions and read in the House of Delegates of the American Medical Association by direction of the State Medical Association. Reputable medical journals took up the work and the protest was given circulation in every part of America. Dr. Moore's name thus immediately became a household word throughout the length and breadth of America.

"He was as popular and useful in his civic and social associations as he was in his professional. He was at one time the pride of all with whom his various duties brought him into relation. Being public spirited, able and always willing to do his duty wherever called added very much to his already arduous labors.

"Dr. Moore was blessed with great strength of character. This was the true basis of his worth and tremendous influence for good in all his labors. When he accepted a challenge to battle for principle he was a strong and uncompromising adversary. He knew no fear; nor was he troubled with doubt.

"On the other hand, when his duties brought him into relation with frail, delicate, suffering humanity he was as sympathetic and tender-hearted as a mother. No personal sacrifices were too great in his efforts to alleviate the condition of his patients; no task too great that tended to mitigate the anxiety and distress of sympathizing friends. He had the interests of the families who constituted his clientele always at heart and was quite as ready to advise them how to keep well as he was how to get well when sick. He was in a broad sense their family doctor of a high order.

"None could be more steadfast in his friendships than he. He would even recognize the weaknesses of his friends and overlook them in the interest of a preponderance of better qualities. He always manifested interest in his friends; his friends were interested in him. Thus they were in a high degree loyal and welded together in mutual interests.

Being broad-minded he was always concerned in the welfare of his community as well as his country. He was devoutly patriotic. His sympathies were always with the so-called masses. He possessed a strong, inherent dislike against domination by classes or cliques and was always ready to aid in bettering the conditions of the less fortunate. These characteristics were unmistakable notwithstanding his associations were mostly among those socially and educationally far advanced. This trait was somewhat unusual and possibly not fully appreciated by all among whom he moved.

"Every view of this painting by any of his friends

will serve to recall pleasant and beneficial recollections of Dr. Moore. It will thus serve to perpetuate his usefulness."

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-second Meeting, November 8, 1920

1. EXHIBITION OF CASES.

A. CASE HAVING A THALAMIC SYNDROME.—By DR. E. W. A. OCHSNER.

B. CASES WITH SYMPTOMS SIMILAR TO THOSE OF INFECTIOUS ENDOCARDITIS.—By DR. FRED A. JOSTES.

These cases are presented this evening because of their similarity and because of the possibility in each case of a mistaken diagnoses of infectious endocarditis. The first case will also be discussed particularly from the bacteriological viewpoint because of the seemingly unidentified organism isolated in the case.

CASE I. Female, age 33, stenographer, admitted October 1, 1920, entering with chief complaint of chills and fever for past five months and loss of appetite.

Family history: mother died of cancer of uterus.

Past history: usual childhood diseases, but following scarlet fever physician diagnosed valvular disease. Has been well since then up to present illness which started in May, 1920, with chills and fever. Temperature 104 to 105 degrees every third day for two weeks. Later more frequent and at irregular intervals. Had severe pains in side at the time and physician diagnosed dry pleurisy. After four weeks chills stopped. Went to Michigan where chills began again and have been present daily. No marked chills recently but merely a cold sensation. At present nauseated with each chill. Referred to Barnes Hospital by Dr. D. M. Kane, of Sturgis, Michigan. Blood culture at Perkins Laboratory, Kalamazoo, Mich., reported negative September 23, 1920.

Physical examination: mucous membranes pale, slight cyanosis. Heart, loud systolic murmur in aortic region. Heard all over chest. Pulmonic second sound greater than aortic second sound. Murmur heard best in sternal line in 4 Ics systolic thrill. Abdomen negative.

Diagnosis from history and physical: Endocarditis infectious? Congenital heart? Malaria?

Laboratory: white blood count varied from 25,700 to 8,600; red blood count 3,830,000 to 1,840,000. Hb. 75 per cent. to 28 per cent. Nonprotein nitro-

gen 91 mg. per 100 c.c. of blood on October 5, 1920; 172 mg. October 26, 1920. Urine, trace of albumin. Many red blood cells and white blood cells. No casts. P. S. P. none in two hours. Phenolsulphothalein.

Bacteriological: repeated blood cultures negative. Urine culture showed a Gram negative bacillus which was not entirely identified, but more than likely fits in with the enteritides group.

Electrocardiograms: slight ventricular preponderance.

Temperature charts: daily rise between 103 degrees and 99.5 degrees.

Cystoscopic: pus from both ureters. Organism cultured as shown. Few casts.

Further diagnosis: pyelitis and cystitis. Nephritis.

Patient gradually grew worse; epistaxis on fifth day very severe and repeated. Hb. reduced to 28 per cent. Transfused with some result; patient became bright again but gradually became comatose. Gangrenous stomatitis developed. An autogenore vaccine made from the organism isolated from the urine was used with no evident results November 11, 1920, N. P. N., 208 mg.

CASE II. White, male, age 23, single. Previously admitted to hospital for hemorrhage following operation July, 1919, for septum deviation. Present admission October 20, 1920.

Chief complaint, chills and fever with profuse sweating.

Family history, father and half brother died of diabetes.

Past history, usual childhood diseases. Gonorrhea four months ago. Entered U. S. service in France; gassed 1918. In August, 1920, had operation for left frontal sinus suppuration. Post operative hemorrhage lasting one week.

Present illness: onset August 28, chills and fever and sweating daily. Rapid loss of weight.

Physical examination: slight emaciation. One carious tooth. Tonsils removed; chest negative; heart, marked retraction of precardium during systole. Low pitched systolic murmur heard best at apex; transmitted into axilla. Blood pressure 112/74. Few palpable glands in triangle of neck and in both inguinal regions. Temperature daily rise to 104-50 after chill.

Laboratory findings: Blood, red blood count, 3,600,000; white blood count, 23,000. Hemoglobin 58 per cent., 86 per cent. polymorphonuclear leucocytosis.

Urine. Blood and many cells, hyaline and granular and leucocyte casts. Cloud of albumin. Urine culture bacillus coli. Phenolsulphothalein 55 per cent for two hours. Repeated blood cultures negative. Nonprotein nitrogen November 3, 1920, 61 mg. on November 13, 1920, 139 mg. Electrocardiogram negative.

Cystoscopy. Bladder contains much pus and many bacilli. Right kidney, blood. Left kidney, blood and urine cloudy—many Gram negative bacilli. Prostate and seminal vesicles subacute inflammation.

DISCUSSION

Diagnosis: Sepsis. Tbc. Pulmonary? Endocarditis acute infectious. Pyonephrosis and pyelitis. Subacute seminal vesiculitis and prostatitis.

Course: Patient is gradually growing worse.

Dr. Dock: These cases are of great interest because of the good picture of subacute endocarditis they present, but we have not obtained a satisfactory culture from either. They are of interest not because we have a few but many patients with the same complaint. We have another patient who was at first thought to have subacute infectious endocarditis. She had a remittent fever, mild septic

symptoms and enlarged heart with murmurs. Blood culture showed staphylococcus, which we always suspect to be a contamination. There was no history by which we could tell whether the heart condition was old. The patient is somewhat improved. The heart is still enlarged but the patient feels perfectly well and evidences of infection are absent. In such a case the explanation is not always easy. Some local diseases might have produced the septic symptoms. Of course we looked from the beginning for other causes of the temperature. The remark about one of the other cases that the blood was examined for malaria during the chill calls up technical error sometimes made. In malaria parasites are usually more numerous any other time than during a chill. In this case the woman had had an operation for uterine cancer. Our consultants tell us there are no signs of recurrence, but it is possible there may have been a thrombus in the pelvic veins. This seems more probable than that she has healing endocarditis. That may be so and one must watch the further course of such a case with great interest.

2. SOME OBSERVATIONS ON CASES OF BRONCHIAL ASTHMA.—By DR. CHARLES H. EVERMANN.

After a brief review of the early literature, seven cases of bronchial asthma out of a series of eighty-one cases are presented because: (1) They gave cutaneous reactions to proteins of foods or pollens. (2) They have been under observation for more than one year, thus laying themselves liable to all the factors which the patient considers as having been associated with or producing their attacks. (3) They have been free from asthmatic attacks since the offending protein has been withheld from their diet, and have produced attacks by eating of the offending protein. (4) They are now on the longest period of freedom from their asthmatic attacks since the onset of their complaint.

The three cases giving cutaneous reactions to wheat proteins had had a nonseasonal asthma for 25, 12 and 9 years, respectively, and had no asthma since eliminating wheat from their diet.

Of the four cases giving cutaneous reactions to pollens, all of whom had been given pollen desensitization injections, two went through their asthma season without attacks; one a case of eleven years, and the other one of four years' duration. One case had been treated two successive seasons without much improvement during the season, but a curtailment of the asthma by October, where formerly, over a period of four years, the asthma had continued until January or February. The other case had had asthma for thirty years, worse from June until November, was treated during two successive seasons and had no asthma for the first time the winter following treatment and only four attacks during the pollinating season.

It is thought that there may be some cases of bronchial asthma giving cutaneous reactions to pollens in which the asthmatic attack is the major symptom, while the hay fever symptoms are given some other pathological term, or are so mild or variable that they are considered of no consequence.

Attention was called to a clinical observation concerning asthmatic attacks. In the sensitive cases, tightening of the chest was first noticed, followed by respiratory difficulty, particularly expiration. In the nonsensitive cases the attack was initiated by cough, increasing in severity and frequency thus producing dyspnea, and was relieved by expectoration of a tenacious sputum. The difficulty apparently is inspiratory and due to accumulated secretion, rather than central or peripheral foreign protein irritation.

The cause of isolated asthmatic attacks during the winter months in patients giving cutaneous reactions to pollens was thought to be due to potent pollen present in undisturbed dust, because such attacks were usually associated with unusual household activities.

Investigation of bronchial asthma along the lines of protein sensitization explains some of the extraordinary features of the disease.

DISCUSSION

Dr. Dock: I don't think that such an important paper as this should be overlooked. Dr. Eyer mann's work has been accurate and painstaking. He has done a great deal more than might be gathered from the few histories he gave and has done a great deal of good in the clinic and obtained valuable information. As usual with new methods in treatment, all the emphasis is laid on the results obtained from the particular method employed. This, of course, has been well shown by the newspapers that announce that asthma can now be cured. Disappointment follows that way of looking at so complicated a subject. Asthmatics, even if they have asthma, very often have other diseases. There are various kinds of chronic respiratory diseases, sinus diseases or other nasal diseases with asthma and they are cured by various methods. When cocaine was discovered it was used largely on hay fever patients which have so many relations with asthma, and some of them stayed well for two or three years. When they began to take out polyps from sinuses the same thing followed. But symptomse returned. At the present time on account of the great amount of work involved many of the examinations are missed in practice. Many patients have tuberculosis. Many of them are neurotics. Dr. Schwab may have a few of them. Anyone who doesn't believe in the neurotic element has only to go to any hay fever resort like Mackinac and see the patients get relapses when they see a patient coming in town with symptoms of hay fever.

Another interesting feature of the subject is the lack of attention paid to the growth of weeds in cities. There are ordinances prohibiting these, but you have only to walk a block and see weeds shoulder high. If you write to the board of health nothing will be done; stop a policeman and point out the weeds and he will tell you it is someone else's business.

The loss of time and energy from pollen-caused diseases is probably as serious in many places as that from typhoid fever. To be sure typhoid precautions are not as well carried out as they should be. No such matters will be as well cared for as they should unless intelligent people show an interest in the matter.

Dr. White: I should like to ask Dr. Eyer mann whether he has done any work on sensitization to bacterial proteins and should like to get his opinion on that.

Dr. Eyer mann (closing): We have done no work on bacterial proteins. I am sorry that I cannot enlighten Dr. White.

3. THERMOPHORE EXPERIMENTATION.—By DR. W. E. SHAHAN.

For several years experimental and clinical work has been carried on in an effort to establish the position of the use of exact quantities of heat conducted for measured lengths of time into circumscribed areas of normal and pathological tissues.

An instrument, termed a thermophore, has been gradually developed for the convenient and automatic control of the variable factors in the clinical use of

heat. By means of this instrument, nickel plated brass rods, termed conductors, can be held constantly at any temperature for any length of time. The ends of these rods are surfaced in various ways and are intended to be placed in direct contact with the tissues treated. They are termed contact surfaces.

By means of various forms of this instrument it was found that different kinds of tissues had rather widely different thermal death points. The corneal epithelium is destroyed completely over an area the size of the contact surface at a temperature of 120 degrees F. applied for ten minutes, or a temperature of 130 degrees F. applied for one minute. A temperature of 128 degrees F. for ten minutes or 140 degrees F. for five minutes will cause atrophy of iris tissues without permanent clouding of the cornea. Based on an apparent obliteration of the filtration angle by this iris atrophy, Dr. Lawrence Post and I conducted an extensive series of "Thermophore Studies in Glaucoma" on animal and human eyes and succeeded in producing prolonged periods (months) of low tension by application of 140 degrees F. for five minutes over the filtration angle in glaucomatous eyes. During these studies interesting cocaine, adrenalin and cocaine-adrenalin reactions on glaucomatous eyes were noted.

In a search for the thermal death point of virulent pneumococci within the cornea, it was found that this occurred in experimental hypopyon ulcers in rabbits at 152 degrees F. applied for one minute. In a simpler instrument an initial temperature of 158 degrees F. for one minute was found clinically efficient in hypopyon keratitis. In the latest constant temperature instrument as now obtainable at the surgical supply houses, 152 degrees F. to 160 degrees F. is used according to the depth of the ulcer.

Starting from the fact that 140 degrees F. applied five minutes to the surface of the cornea caused atrophy of the iris, it was thought that epibulbar and conjunctival neoplasms might have a thermal death point below that of normal sclera, cornea or conjunctiva; 130 degrees F. to 142 degrees F. applied for one to two minutes was tried on several types of tumors. One peculiar corneal growth of seventeen years' standing was completely destroyed without a trace of injury to the eye. A squamous carcinoma and a papilloma also yielded promptly without injury to the eye. This field is still being investigated. There may also be a dermatological field for this kind of work.

4. BLOOD ANALYSIS FOLLOWING ACACIA GLUCOSE INJECTION.—By DR. H. L. WHITE and DR. JOSEPH ERLANGER.

A strongly hypertonic glucose and gum acacia solution was injected intravenously into normal, asphyxiated and shocked dogs, and the resultant changes in blood volume and composition were studied.

The immediate effect was a marked increase in blood volume; in normal and asphyxiated animals the blood volume then gradually fell toward but did not completely return to normal in several hours.

The blood volume, markedly diminished in shock, is increased to above its normal level by the injection and then gradually falls to or below its normal level.

The absolute plasma protein is increased slightly or not at all in normal animals and in asphyxiated animals; in an animal which had been bled there was a slight increase when the amount withdrawn was allowed for. The absolute amount of plasma protein is markedly diminished in shock, is increased by the injection and the increase continues for some time after the injection. It is believed that at least a

part of the increase in plasma protein following the injection in shock is due to a passage of protein in through the vessel walls.

Gum acacia seems to take the place of plasma protein in holding water in the circulation.

There is a marked hyperglycemia immediately after the injection in normal animals; this is accentuated by morphine and asphyxia. The blood sugar value falls to or nearly to normal within two hours. In shocked animals the blood sugar behaves much as in normal animals. There is only a trace of sugar excreted by normal animals excepting when morphine or asphyxia cause marked glycosuria. Shocked animals without morphine excrete some sugar unless, as a result of the shock, there is a suppression of urine.

The fluid drawn into the blood stream brings with it chlorides in concentration equal to the chloride concentration of plasma but the diffusion into the blood stream of sufficient additional chlorides to bring the chloride concentration of injected fluid up to that of plasma is not complete for several hours.

The entrance of urea into the plasma takes place with such facility that the nonprotein nitrogen concentration of the plasma remains constant.

There is no suppression of urine in normal animals as a result of the injection, if anything the rate of secretion is slightly increased.

No hemolysis, hematuria, hemoglobinuria, albuminuria, cylindruria, fluctuations in body temperature or any other untoward effects were observed as a result of the injections.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-third Meeting, November 29, 1920

1. EXHIBITION OF CASES.

'A. RESECTION OF CLAVICLE IN A CASE OF TUBERCULOSIS OF STERNO-CLAVICULAR JOINT.—By DR. EVARTS A. GRAHAM.

White male, age 30 years. Single. Occupation, laborer. Admitted to Barnes Hospital, November 2, 1920.

Chief complaint: Bruise on chest. First symptoms were in March, 1920. Pain in upper region of sternum and slightly to left. Slight redness, pain and swelling of left clavicular region. Patient came to O. P. D. in April, 1920. Chest was aspirated and yellowish fluid with white granules was withdrawn. Diagnosis of tuberculosis of tendons was made.

At this time there was a sinus and discharge in the left clavicular region.

Physical examination on admission: November 2, 1920, negative except for local point of surgical interest. There is an erythematous, soft, fluctuating mass over the sternal end of left clavicle, four and one-half cm. in diameter and projecting one cm. just below this there is another red patch five cm. across and four cm. up and down with inner border in the center of manubrium. There is an irregular palpable defect involving almost the entire manubrium over which the tenderness is most marked. In this area there are two sinuses discharging, thin, greenish material. These sinuses are located over first I. C. S.

Operative note: Elliptical incision around diseased skin including sinuses. Claviculo sternal joint filled with granulation tissue, apparently tuberculous. Similar granulation tissue also found extending behind sternum and laterally behind clavicle. Resec-

tion of about one inch of clavicle was made and some of manubrium removed with Rongeur forceps. This leaves a gap of about two inches between end of clavicle and sternum. The first rib seems to be intact, including first costal cartilage. This was not disturbed. There is no evidence of false joint in first rib as suggested in X-ray. The underlying pleura seems thickened and was not injured during operation. Wound packed with iodoform gauze. No sutures.

Post-operative course: Uneventful. Wounds granulated up with dressing of iodoform and balsam peru packs. Motion of left arm unimpaired.

Patient is able to lift weights and use arm practically as if normal and better than before operation. Discharged from hospital on twenty-seventh post-operative day.

B. A CASE OF WAR SURGERY IN PEACE.—By DR. EVARTS A. GRAHAM.

Colored male, age 45 years. Married. Occupation, laborer. Admitted to Barnes Hospital November 16, 1920, at 8:45, with history of having been shot in the right shoulder and chest at 11 o'clock the night of November 15.

Chief complaint: Pain in the right side of chest. Dizziness. Has spit up a large amount of bright, red blood.

Physical examination on admission: Punctured wound over pectoral muscles in right shoulder region just in front of axilla. No emphysema of cellular tissue. Right arm movements appear normal. Loss of sensation on dorsum of forearm. Grip of right hand is decreased.

Chest examination: Shows no lagging of right side. Tactile fremitus is diminished over right base. P. N. is dull. B. S. are diminished. There are occasional friction rubs. No point of exit of bullet found posteriorly. Examination of heart negative. The rest of physical examination negative. White blood count 12,000. Red blood count 4,600,000. Hemoglobin, 70 per cent. Treatment given, 1500 units of antitetanic serum. Temperature on admission 100. Pulse 95. Respiration 32.

Stereo-plate of right side of chest showed apparent fracture of sixth rib in axilla. General haziness over right chest of fourth rib anteriorly, downward. Roentgen-ray diagnosis: Foreign body of bullet just within chest wall in eighth I. C. S., 3 cm. from midline and two and one-half cm. from ring marker used posteriorly and about 1 cm. above horizontal plane through the latter.

Patient taken to operating room immediately. Operative note: Wound and tract excised down to thoracic wall in apex of axilla under local anesthesia, followed by suture. With nitrous oxide (positive pressure) incision along fifth interspace from mid-axillary line to mammary line. No fluid. Lung extensively adherent posteriorly with old, firm adhesions. Impossible to deliver lung out of incision. Sixth rib found fractured and fragment of bone found embedded in lung posteriorly. Bullet not found but felt in posterior wall (?). Closure by bringing ribs together with No. 3 catgut around both fifth and sixth ribs. Wound closed in layers after continuous suture of pleura and intercostal muscles. No drainage. Patient in good condition.

Post-operative course: Had maximum temperature, first post-operative day of 103. This temperature gradually fell until it was practically normal after sixth post-operative day.

Patient discharged as well on sixteenth post-operative day.

Wounds healed. Patient had very little discomfort after operation.

C. A CASE OF GONORRHEAL ARTHRITIS.—By DR. JAMES A. EVANS.

C. L., age 25, male, white, laborer.

Gonorrhea three years ago for thirty-five days with gonorrheal conjunctivitis. Two weeks after gonorrhea was thought to be cured had flexing pains and swellings in hands. Then knees began to swell and have remained so for three years, the amount of swelling varying. Dull pains in knees for past year only. Eight shots of gonorrhea vaccine in 1917 without relief. Began to use crutches about six months ago. Nocturia five and six times past three years.

P. E. Many patent corneal vessels in left eye. (History of inflammation at age of eight.) Left shoulder slightly swollen anteriorly and posteriorly. Heat, no redness. Movements mostly scapular. Tenderness on pressure anteriorly and posteriorly. Both knees immensely swollen, right 44 cm., left 46¾ cm. Fluctuant, red, hot and tender on pressure everywhere. Flexion limited by pain at 60 degrees. Right ankle swollen, slightly reddened, fluctuant, some heat. Tenderness over internal aspect of joint. No pain or limitation of motion. Prostate slightly enlarged, boggy, tender. Secretion contains few pus cells.

Wassermann negative. Urine negative.

Blood: Red blood count, 3,808,000; white blood count, 9,800. Hg. 65 per cent.

X-ray: Left ankle, secondary bone decalcification. Left shoulder: Between the greater tuberosity and the articular margins, there is a smooth excavated space suggestive of loss of substance at this point. Knee joints, slight roughening of the margins of the femur and tibia on each side, due to hypertrophic change and possibly some associated excavation in these bones. Decalcification. Process mostly peri-articular.

Aspiration of knees. Right, 50 c.c. yellow turbid fluid. Left, 200 c.c. yellow turbid fluid. Smear, polymorphonuclear leukocytes predominating. Culture negative.

Orthopedic consultation: In view of history and fact that Roentgen-ray shows process to be mostly periarticular, diagnosis of gonorrheal arthritis is made.

G. U. consultation: Chronic prostatitis. Vasopuncture advised.

Course after vasopuncture: 7 c.c. of 25 per cent. argyrol injected on both sides. Had very slight afternoon rise of temperature for three or four days after. Right knee 2 cm. smaller; left 3¾ cm. smaller a week later.

Further treatment shall consist of local hyperemia, more drainage, gonorrhea vaccines, baking and massage. If resistant to all such measures further surgical intervention is advised.

DISCUSSION

Dr. Brooks: This case illustrates mainly that if these patients are let lie in bed for long periods with the knees drawn up that they get permanent contractures. These patients should be kept in a good functional position and a long period of flexure should never be allowed in these joint cases. Long continued flexion of the knees together with spasm of the flexor muscles produces one of the worst deformities with which we have to deal, namely, a posterior subluxation of the tibia, a condition which once acquired is practically impossible to get rid of.

Two other points which interested me particularly were the X-ray pictures of the head of the humerus, and Dr. Evans' statement that this case was one of periarticular inflammation. All arthritis is peri-articular. There cannot be an inflammation of a cavity itself. The inflammation is in the walls of

the cavity. The inflammation is not only in the capsule of joint, but it is in the ends of the bones, and it is this inflammation in the bones which causes rarification in the immediate vicinity of the joint cartilage.

D. A CASE OF INOPERABLE CARCINOMA IN A GIRL 17 YEARS OLD.—By DR. GLOVER H. COPHER.

This patient, who is 17 years of age, entered the hospital on November 3, 1920. She complained of diarrhea, pain in abdomen, and occasional vomiting of blood and also of passing of blood from the bowels. She states that in May, 1920, she had rheumatism in the right ankle which shifted to various other joints. The tonsils were removed May 27th. No rheumatism since.

In July, 1919, patient began vomiting which continued for five days. On the fifth day she vomited coffee ground material and also bright red blood. She then became unconscious for six days and nights during which time there was vomiting of bright red blood each day. Also at this time the stools frequently contained red blood. Temperature subnormal. She improved and returned to school in September, 1919, where she remained for two months. In January, 1920, she began to vomit again. This continued until May, 1920. During this time her bowels moved from two to three times a day. She became very weak. The vomiting had no relation to meals.

Two weeks ago she began to have a pain in the right costal margin which radiated to right shoulder. She has never been jaundiced. At present she has no appetite and is nauseated and vomits daily.

Four weeks previous to admission her family physician noticed a lump in the abdomen about the size of a walnut just to the right of the umbilicus. The mass was freely movable. Patient is unable to take a deep breath because she feels as if something were pushing up her right lung. Morphine is said to be the only thing that relieves pain. The abdomen is distended continuously. There has been a loss of 25 pounds in weight.

Physical examination: Patient emaciated and pale. Percussion note unimpaired over both bases, somewhat higher on the right. Breath sounds faint. Apex beat is outside of midclavicular line. A large, hard, tender and nodular mass fills anterior flank of abdomen extending across to left side above umbilicus. There is a small mass the size of a hen's egg just to left of umbilicus, also hard, nodular, tender and movable.

Laboratory findings: Urine contains albumin, hyaline and granular casts. Hemoglobin 38. Red blood corpuscles, 3,500,000. Leucocytes, 22,000. Stools, clay colored with positive test for blood. Transferred to surgical service for exploration November 10, 1920. No ascites. Liver contained many white nodules which were hard and umbilicated with omentum adherent to many of these nodules. Lower border of liver was at level of umbilicus. Stomach normal on palpation. A small hard nodule was found apparently in the head of the pancreas with many adjacent and large lymph glands. Impossible, however, to be certain that mass is in pancreas because of presence of adhesions and presence of growth in lymph glands. No mass felt anywhere in intestine. Gall-bladder, appendix and pelvic organs normal.

Post-operative notes: Patient has improved symptomatically. Abdomen is still distended. Has dyspnea at times and a great deal of pain which is relieved by morphine. Has been given one deep Roentgen-ray treatment.

This case is presented to the Society because it is one of undoubted carcinoma in a girl 17 years of

age. Microscopic sections of one of the nodules which was removed from the liver show an undoubted carcinoma. Dr. Graham considers that perhaps the primary source was the pancreas.

DISCUSSION

Dr. Schwarz: I would like to know about the ovaries. Were they normal?

Dr. Copher: The ovaries were normal in every way, but undeveloped and small.

Dr. Graham: I just want to say a word or two about the case presented by Dr. Copher. The reason I do not think the tumor is a primary carcinoma of the liver is because the liver seemed to be filled with small umbilicated nodules very much like a secondary metastatic process. It did not contain a single large tumor such as I have seen in a few cases of primary carcinoma of the liver. Of course in this case there may be a tumor in the substance of the liver which was not apparent at the surface operation. The gall bladder and bile ducts seemed to be normal. No definite tumor in the pancreas could be made out, but a nodule was felt there which seemed to be the only demonstrable possibility of a source for the carcinoma unless we are to think that it originated in the liver. The tumor itself is of great interest. There are a couple of sections under the microscope which seem to indicate unquestionably that the tumor is a carcinoma and many mitotic figures are visible.

2. EXARTICULATION OF THE HIP AFTER LIGATION OF THE COMMON ILIAC ARTERY.—By DR. BARNEY BROOKS.

Amputation through the hip joint is generally considered as an operation associated with a high rate of operation mortality. The greatest difficulty encountered in the operative procedure is the control of hemorrhage.

The several methods of applications of tourniquets which have been described have the disadvantage that the muscles and skin cannot be amputated near the pelvic bone. McBurney has recommended temporary compression of the common iliac artery during the amputation of the extremity. Since Halsted has shown that permanent ligation of the common iliac artery is not likely to produce gangrene, even when the extremity is not amputated, it would seem that this artery might be permanently ligated preliminary to exarticulation of the hip joint.

This procedure was carried out on a man suffering from a spindle cell sarcoma of the thigh. The result was that the patient stood the operation without any evidence of shock. There was very little loss of blood and the anemia of the tissues composing the amputation flaps was not sufficient to influence the kindly healing of the wound.

It was found during the course of the amputation that the obturator and sciatic arteries bled a stream with considerable force, but no pulsation. There was some bleeding from all of the tissues, but the bleeding was so little that very few hemostats were used and there was very little blood lost.

It would seem that after a preliminary ligation of the common iliac artery that a very radical amputation of the hip could be performed without great operative risk.

DISCUSSION

Dr. Graham: I think that this work which Dr. Brooks has done deserves a great deal of serious thought. He has not made merely an isolated case report but something considerably more. The great importance is in the fact that ordinarily the opera-

tion of exarticulation of the hip has been accompanied by almost a prohibited mortality. If the operation, however, can be made safe by so simple a measure as a preliminary ligation of the common iliac artery it would be a great step in advance. Of more importance is the relationship of this point to the treatment of sarcoma of the lower extremities. Those who are not interested in clinical work perhaps fail to realize that there are hardly any cases of periosteal sarcoma or fascial sarcoma which survive the ordinary amputation for more than a year or two. Cases which survive a longer period of time attract a great deal of attention. This fact is so striking that Dr. Codman of Boston has undertaken to get information from surgeons all over the United States as to whether or not they have had a single case originating in the bone other than of the giant cell type that has lived for more than three years following operation. I think that if it is possible to do a really radical amputation of the extremity in the sense that Dr. Brooks has mentioned, namely of taking out not merely the bone but also the muscles and the fascia attached to the pelvis, then probably the percentage of recurrences can be greatly reduced and we will, I even believe, be able to say to the patient who has a sarcoma of the leg that there is a fair chance of his recovery. If the operation can be made safe then a radical amputation can be done and also many more cases will be prevented from having a recurrence.

3. THE ASSOCIATION OF HEPATITIS WITH EXPERIMENTAL CHOLECYSTITIS AND ITS BEARING ON THE PATHOGENESIS OF CHOLECYSTITIS IN THE HUMAN.—By DR. M. G. PETERMAN, DR. W. S. PRIEST, JR. and DR. EVARTS A. GRAHAM.

Experimental cholecystitis can seldom be produced in dogs merely by the injection of bacteria into the lumen of the gall-bladder unless the cystic duct has been previously ligated. In 19 dogs the cystic duct and vessels were ligated; a cholecystitis was produced by the injection of organisms into the lumen of the gall-bladder. These dogs were killed after varying intervals and examined at once. Cultures were taken of the gall-bladder and of the liver in various places.

The organisms recovered from the liver and gall-bladder were proved to be the same as those injected. In all of these 19 cases of experimental cholecystitis, inflammatory changes have been observed in the liver, which have consisted chiefly of a leucocytic infiltration around the bile ducts in the interlobular sheaths. The pathology observed has been practically identical with that already noted by us (Graham) in human cases of cholecystitis which have come to operation. The hepatitis in association with streptococcal cholecystitis was more severe than that which occurred in infections with *b. coli*. The fact that these changes are known not to have been present before the creation of the cholecystitis and that they have consistently followed it in each case makes apparent the probability that all cases of cholecystitis are accompanied by a hepatitis. This deduction agrees with the conclusion reached in a previous article by one of us (Graham). In our experiments recorded here the cystic duct was ligated and coincidentally the large lymphatic trunks passing along that duct were obstructed by the ligation. The only paths, therefore, by which the infection could have spread to the liver were either the lymphatics or veins from the gall-bladder which pass through the normal attachment of that organ to the under surface of the liver. The presence of

an abundant lymphatic connection between the gall-bladder and liver through the normal attachment of these two organs has been well shown in the work of Sudler. The experimental evidence strongly suggests that the hepatitis secondary to a cholecystitis is probably a lymphogenous infection. Additional support to this view is found in the fact that the leucocytic infiltration is consistently more pronounced in portions of the liver near the site of the gall-bladder than at more remote parts. Since, on the other hand, the veins in the attachment of the gall-bladder to the liver drain into the portal vein, one would expect that infection transported through these venous channels would be nearly equally distributed throughout the liver.

Conclusions.—After experimental production of cholecystitis in dogs inflammatory changes have been constantly found in the liver, viz., a pericholangitis with marked leucocytic infiltration of the interlobular sheaths.

The same organism can be isolated from both the liver and gall-bladder.

Infections of the gall-bladder apparently by way of the lymphatics from the liver are easily produced experimentally. In any consideration of the pathogenesis of cholecystitis in the human this lymphatic route must be regarded as important and probably frequent, although apparently it has heretofore received no attention.

The probability of a frequent occurrence of a vicious circle between an inflamed gall-bladder and an inflamed liver would seem to afford a strong argument in favor of cholecystectomy as an operation of choice in cases of cholecystitis.

DISCUSSION

Dr. Opie: These experiments demonstrate very clearly a relationship between cholecystitis and lesions of the liver, and with the preceding observations of Dr. Graham show how constantly hepatitis is associated with the cholecystitis of gall stones. Drs. Peterman and Priest have discussed the relationship of the lesions of the bile ducts to lesions of the gall-bladder and have brought evidence that infection is transmitted by way of the lymphatics. Some experiments on the dog with cantharadin have brought to my attention the rich lymphatic network uniting the liver and gall-bladder. Thrombosis of lymphatics occurs in the gall-bladder and liver; the liver becomes edematous and the wall of the gall-bladder is immensely thickened by edema, the lymphatics being conspicuously distended. The lesions surrounding the bile ducts described by Drs. Peterman and Priest are not peculiar to cholecystitis. They are found in livers of those who have died with a variety of infectious diseases, for example, with pneumonia, particularly where there has been jaundice. In some instances at least cholecystitis and cholangitis may be simultaneously the result of hematogenous infection.

Dr. Brooks: I have seen these sections of Dr. Peterman's and Dr. Graham's and there are inflammatory changes in the liver in all of the instances in which the gall-bladder was inflamed. After all it is what we should expect to find. Infection is never a localized disease, that is, the reaction to infection is widely extended. I would like to ask Dr. Peterman if he would not expect to find a similar change in the liver secondary to infection of other organs in the abdomen, as for example the appendix.

Dr. Graham: The point that Dr. Brooks has just brought up is one that we readily think of and it is one that we have had in mind. In fact, we have already done a considerable amount of work on this point which is not incorporated in this report to-

night. The well-known clinical relationship between appendicitis, cholecystitis, and duodenal ulcer suggest some intimate connection in pathogenesis. This relationship is of course particularly pronounced between the appendix and gall-bladder. When we realize as Dr. Peterman has brought out tonight that we can almost demonstrate a hepatitis in connection with a cholecystitis, the question comes up, is the hepatitis first or is the cholecystitis first? We know from the experiments mentioned tonight that hepatitis may follow a cholecystitis. Sudler's careful work on the lymphatics of the gall-bladder shows an intimate connection between the lymphatics of the liver and gall-bladder. Moreover it can be demonstrated that a lymphatic drainage may occur from the liver to the gall-bladder. Drainage in the reverse direction is also possible. We may imagine therefore it seems to me the possibility of the vicious circle existing between an infected gall-bladder and the liver. It is easy to understand the origin of a hepatitis as a result of bacteria getting into the liver through the portal circulation from an infected appendix or from a duodenal ulcer. It is therefore easy to understand how a cholecystitis may occur as the result of a lymphatic infection of the gall-bladder, secondary to a hepatitis induced by either an appendicitis, a duodenal ulcer or any other inflammatory condition connected with the portal system. As a matter of fact, in experiments which Dr. Peterman has already done but which we do not wish to report on extensively tonight it has been possible to show that a hepatitis may be produced by injecting organisms into a radicle of the portal vein inducing a hepatitis and also a cholecystitis. When we recall that in cases of cholecystitis the inflammation of the gall-bladder usually extends throughout the wall and if we bear in mind the idea that cholecystitis perhaps often begins as a lymphatic infection of the wall it becomes more obvious that operations which consist merely in draining the lumen of the gall-bladder can hardly be expected to yield satisfactory results. The gall-bladder is very much like the appendix in structure. It is a slightly vascular organ. Its distal portion is far removed from the blood supply which is easily interfered with by pressure changes in the region of the beginning of the cystic duct. One would certainly not expect to accomplish very much in cases of appendicitis by merely draining the lumen of the appendix. It seems to me equally futile to expect results by merely draining the lumen of the gall-bladder. Moreover, the important point should not be overlooked that an infected gall-bladder may constantly reinfect the liver and produce serious changes in it if allowed to remain.

4. SPONTANEOUS CURE OF CANCER.

—By DR. FRED J. TAUSSIG.

Medical literature records a considerable number of spontaneously cured cancers. In general, pathologists have accepted this as possible although Von Hansemann denies this possibility except in the case of chorio-epithelioma.

The case reported by the author was first seen June 6, 1909. At that time she had an inoperable cancer of the cervix with a large crater. In the course of an excochleation done a few days later the peritoneal cavity was accidentally opened and it was decided to remove the uterus in order to provide better drainage. This was done leaving evident carcinoma behind. The patient recovered and three months later was subjected to an exploratory laparotomy. Enlarged lymph glands were found in the pelvis, especially one the size of a walnut, a portion of which was excised and found to contain carcinoma. This lymph gland was too adherent to the iliac vessels to be removed. The tubes and ovaries together with

a small amount of surrounding cellular tissue was removed at the time of this operation. The patient was again seen October 15, 1920, over eleven years after this second operation, in perfect health, showing no evidence of carcinoma in the pelvis. An additional feature of this case was that there was also present an early carcinoma beginning at the edge of a condyloma acuminata hanging from the urethral meatus. This was excised at the time of the hysterectomy.

The author in conclusion analyzes the factors that may produce spontaneous cure of cancer. He is engaged in studies of the blood of this patient and the effects of her blood serum on other patients.

DISCUSSION

Dr. Clopton: About twelve years ago I operated on a boy with adenocarcinoma of the thyroid. The cancer grew in between the rings of the trachea and the glands of neck were involved. As I hadn't supposed that there was a carcinoma of the thyroid we did not have permission to do a complete laryngectomy, and we were forced to leave this growth in place, but he went home to his father who was a doctor. Later on it was suggested that we do a complete operation. The father objected to this. The boy got such Roentgen-ray treatment as was possible at that time. He is alive today and has had no return of symptoms. This I think was a case of retrogression as it was some time after the operation before he got Roentgen-ray treatment.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular scientific session of the Buchanan County Medical Society was held at the Commerce Club rooms, January 19, 1921. The president, Dr. Conrad, called the meeting to order.

The following papers were read:

"Factors Making Birth Control Logical," by Dr. W. L. Kenney.

"Modern Methods of Conducting Labor," by Dr. A. L. Gray.

The paper of Dr. Kenney was discussed by Drs. Woodson, Willman and DeLamater, and Drs. Stevenson, Willman and DeLamater discussed Dr. Gray's paper.

Dr. Woodson presented a letter from the State Chairman of Hospital Standardization Committee asking for a report on progress of the local committee. This was referred to the chairman of the local committee for reply.

The secretary read the following communication: "With the view of stimulating the writing of some good papers for your Society by the younger men, the *Medical Herald* makes the following proposition:

"Fifty dollars in cash will be paid for the best paper presented before this Society between January 1 and June 1, 1921.

"Twenty-five dollars in books (to be selected by the winner) for the second best paper.

"No papers to be considered from members who have been in active practice longer than ten years.

"The officers of the Association shall judge the merits of the contributions and make their report on the first day of July, 1921.

"Hoping this proposition will be accepted by your Society in the spirit in which it is intended, I remain,

Very sincerely,

Charles Wood Fassett,
Managing Editor."

Upon motion, duly seconded, the Society accepted the offer of the *Medical Herald* and the secretary

was instructed to publish the proposition in the next issue of the *Bulletin*.

Attendance, 50.

OLIVER C. GEBHART, M.D.,
Secretary.

BUCHANAN COUNTY MEDICAL SOCIETY MEETING OF FEBRUARY 2

The regular meeting of the Buchanan County Medical Society, held at the Commerce Club rooms February 2, 1921, was called to order at 8:00 p. m. by the president, Dr. Conrad. The minutes of the meeting, January 19, 1921, were read and approved.

The secretary reported the Commerce Club active membership dues are now thirty dollars annually, but the payment allowed last meeting would be credited to the 1921 membership upon payment of an additional five dollars. Motion by Dr. Kenney, seconded by Dr. Bell, that a voucher be drawn for five dollars to balance payment for active membership in Commerce Club for 1921, carried.

Motion by Dr. Ladd, seconded by Dr. Jacob Geiger, that the notice in the *Bulletin* relative to proceedings in case any member of this Society fraternizes with any unethical cult or irregulars, be continued, carried.

Motion by Dr. Jacob Geiger, seconded by Dr. Ladd, that the committee be continued to investigate and report any member of this Society who fraternizes with any unethical cult or irregulars or patronizes any of their institutions, carried.

Motion by Dr. Morton, seconded by Dr. Bell, that the committee be continued to confer with the officers of the Graduate Nurses' Association relative to the ethics of their members serving in irregular institutions, carried.

Attention was called to House Bills 113, 288 and 360 in the legislature.

Motion by Dr. Morton, seconded by Dr. Jacob Geiger, that the Society send a letter signed by the president and secretary, protesting against these bills and that a complete list of the membership of this Society be inclosed, carried.

Dr. Byrne reported the Sisters at the Sacred Heart Convent desired to borrow the projectoscope belonging to this Society and made a motion that the request be granted, seconded by Dr. Kenney, carried.

Motion that the amount of Dr. J. C. Smith's check for 1921 dues be refunded to his widow, duly seconded, carried.

The president appointed Drs. Leonard, Morton and Jacob Geiger a committee on resolutions for our late member, Dr. J. C. Smith, deceased.

A letter from the secretary of the Children's Bureau of St. Joseph, Mo., asking for the indorsement and co-operation of this Society, was read.

Motion by Dr. Morton, seconded by Dr. Ladd, that a committee of three be appointed by the chair to investigate the matter of the examination of children of preschool age with the end in view of determining what relation this Society should bear to this work and report its findings with such recommendations as it may see fit to this Society at as early a date as possible, carried. Drs. Kenney, Ballard and Byrne were appointed this committee.

Motion by Dr. Byrne, seconded by Dr. Elam, that a committee of three be appointed to confer with the legislation junketing committee coming to investigate the advisability of moving State Hospital No. 2, carried. The president appointed Drs. Jacob Geiger, C. R. Woodson, Leroy Beck.

Motion by Dr. Jacob Geiger, seconded by Dr. Beck, that a committee of three be appointed to meet with the board of health and the public health committee of the Commerce Club, relative to the establishment

of a city hospital, carried. The committee appointed was, Drs. Elam, Morton and Owens.

Attendance, 30.

OLIVER C. GEBHART, M.D., Secretary.

BOOK REVIEWS

BASAL METABOLIC RATE DETERMINATIONS. By Walter M. Boothby, M.D., and Irene Sandiford, Ph.D., Section on Clinical Metabolism. The Mayo Clinic, Rochester, Minnesota, and The Mayo Foundation, University of Minnesota. Octavo volume of 117 pages with 11 Tables and Charts of Explanation. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$5.00 net.

This brochure might better be entitled "The methods of obtaining the basal metabolism rates now in use at the Mayo Clinic." For, with a brief historical introduction, the authors detail their methods and results. No case histories are given and the relation of metabolic rates to clinical syndromes is hardly touched upon. The book is a valuable contribution to this field of laboratory work, but there remains now the need of a similar report detailing methods and results with the closed circuit type of calorimeter (such as Roth of Battle Creek might give) and also of a study of the clinical relations and values of calorimetry.

G. H. H.

THE OXFORD MEDICINE. By Various Authors. Edited by Henry A. Christian, A.M., M.D., Hersey Professor of the Theory and Practice of Physic, Harvard University; Physician-in-chief to the Peter Bent Brigham Hospital, Boston, Mass., and Sir James Mackenzie, M.D., F.R.C.P., LL.D., F.R.S., etc. In five volumes. Illustrated. Volume 1. The Fundamental Sciences and General Topics. Oxford University Press, American Branch, 35 West 32nd Street, New York.

In reviewing a system of medicine one may be permitted to take one or both of two viewpoints. One may criticise any of the individual articles or may criticise the plan of the system as a whole. In Oxford Medicine the individual articles were reviewed in these columns when they appeared in advance sheets; they are in every instance written by a recognized authority and are of the highest grade of excellence. But the volume as a whole is poorly planned. There are too many talky essays on vague topics—such as "Present Day Medicine"—which could be reduced, for they cumber an already very heavy book. Then in this volume of introductory subjects there is a great unevenness in the amount of space allotted. There are several chapters on infection, immunity, acidosis, radiations and their effects, but no mention of the fundamental principles of tumour life. There is a good chapter on hydrotherapy and one might assume from this that other methods of therapy would be similarly treated, but we find no chapter on massage, none on psychotherapy, nor any on electrotherapy. There is a chapter of seventy-five pages on "Aviation Medicine," filled full of the most technical detail as to the prevention of flying accidents. The reviewer feels warranted in saying that this chapter has no place in a book of this kind. There is a peculiarly out of place chapter on the prevention of respiratory diseases, no chapter on the prevention of infectious diseases, intestinal diseases, nor industrial diseases. Meyer and Gottleib's diagram of the autonomic nervous system appears twice, with an almost synonymous explanation in the text, by different

authors. This is always the defect of a system of medicine or surgery written by various contributors—repetition and redundancy. It is not in evidence in the second volume of Oxford Medicine, but it undoubtedly is in the first. It may seem ungracious to be so captious when we have so much to praise; we can only say that the defect seems very real with the volume in hand.

The loose leaf device is a momentous improvement over the days when the reviewer bought systems of medicine. We wish someone would bring forward a method of using India paper also.

L. C.

NITROUS OXIDE OXYGEN ANALGESIA AND ANESTHESIA IN NORMAL LABOR AND OPERATIVE OBSTETRICS. Edited by F. H. McMechan, M.D. A Monograph Prepared for the Benefit of All Those Concerned in Safer and More Efficient Obstetrics and Anesthesia. Published by the National Anesthesia Research Society.

This book is based on the theory that pain during labor, although physiological, is no more necessary nor excusable than during a surgical operation. Nitrous oxide oxygen anesthesia and analgesia are recommended for the relief of this pain on the following grounds: 1. Its immediate safety is greater and after effects on both mother and child less marked than with any other known anesthetic agent. 2. It relieves pain but does not interfere with the expulsive power of the woman in labor. 3. Its effects are immediately obtained and it is quickly eliminated leaving no undesirable sequelae although administered over a long period of time.

In reading through its pages one is both pleased and surprised to find the recent advancement and large amount of research work that has been done not only in this but other lines of anesthesia.

The accurate data of experimental workers combined with the observation of many anesthetists and obstetricians over a large series of carefully followed cases, gives conclusive proof that nitrous oxide oxygen is not only the safest but the ideal anesthetic for the parturient woman.

M. H. C.

NOUVEAU TRAITE DE MEDECINE. Publié en 21 fascicules sous la direction de M.M. G.-H. Roger, doyen de la Faculté de Paris, médecin de l'Hôtel-Dieu, membre de l'Académie de Médecine; F. Vidal, professeur à la Faculté de Paris, membre de l'Académie des Sciences et de l'Académie de Médecine; P.-J. Tessier, professeur à la Faculté de Paris, médecin de l'Hôpital Claude-Bernard, membre de l'Académie de Médecine. Vient de paraître: Fascicule Ier: Maladies Infectieuses: I Volume de 482 pages avec 55 figures dans le texte et 3 planches en couleurs. Masson et Cie, 1920. Relié 35 fr. net.

This is the first volume of a projected system of twenty-one volumes under the general editorship of G.-H. Roger F. Vidal and P.-J. Tessier. The present book is of a very high standard of excellence. Roger writes the introduction on the general theories of infection, and the chapters on erysipelas and streptococcic infections. Dopter contributes the chapter on meningitis, with very full and valuable accounts of the French method of injection of serum into the ventricles. Menetrier and Stevenin have the section on pneumonia. We shall await the following volumes impatiently.

L. C.

TROPICAL OPHTHALMOLOGY. By Robert Henry Elliot, M.D., B.S. (Lond.), ScD. (Edin.), etc. With 7 Plates and 117 Illustrations. London: Henry Frowde, Oxford University Press, Hodder & Stoughton, Warwick Square, E.C., 1920. Price, \$12.50.

A book highly interesting to any ophthalmologist and intensely practical for those practicing in the

tropics. Somewhat less practical for the English practitioner, but touching a subject much closer to him than to his American confrere. It is a volume that can be read with profit by any ophthalmologist, but will be studied except in part by few. It is announced as the first textbook on the subject.

Two chapters are devoted to injuries and diseases from tropical animals and parasites, conditions that are very rare in this country. The chapters on cataract and eye diseases are well worth studying.

The volume is a distinct addition to ophthalmic literature.

J. W. K.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies."

NEOCINCHOPHEN.—The ethyl ester of methyl-phenyl-quinolin-carboxylic acid. It was first introduced as novatophan. The actions and uses of neocinchophen are the same as those of cinchophen (New and Nonofficial Remedies, 1920, p. 224), only it is tasteless.

TOLYSIN.—A brand of neocinchophen complying with the N. N. R. standards. It is supplied in the form of a powder and as tolysin tablets 5 grains. Calco Chemical Co., Bound Brook, N. J.

SALIGENIN.—Salicyl Alcohol.—Saligenin is a local anesthetic, similar in action to procaine. It is said to be as effective as procaine but much less toxic; also the anesthesia produced lasts longer, and for this reason the addition of epinephrin is not necessary. Saligenin is a white solid soluble in water.

SALICAINE.—A brand of saligenin complying with the N. N. R. standards. Calco Chemical Co., Bound Brook, N. J. (*Jour. A. M. A.*, Jan. 8, 1921, p. 113).

PNEUMOCOCCUS VACCINE No. 14-BEEBE.—A pneumococcus vaccine (see New and Nonofficial Remedies, 1920, p. 285) containing Types I, II, III and IV diplococci pneumoniae in equal proportions, suspended in physiological solution of sodium chloride, each c.c. containing 500 million killed bacteria. Marketed in vials of 6 c.c., 10 c.c., and 20 c.c. Beebe Laboratories, Inc., St. Paul, Minn.

TYPHOID-PARATYPHOID VACCINE No. 39-BEEBE.—A typhoid vaccine (see New and Nonofficial Remedies, 1920, p. 291) marketed in packages of three 1 c.c. vials, each c.c. containing 1,000 million killed typhoid bacilli, 500 million each of killed paratyphoid bacilli A and killed paratyphoid bacilli B, suspended in physiological solution of sodium chloride; also marketed in 30 c.c. vials. Beebe Laboratories, Inc., St. Paul, Minn.

COLON VACCINE (ACNE) No. 11-BEEBE.—A colon bacillus vaccine (see New and Nonofficial Remedies, 1920, p. 282) marketed in packages of six 1 c.c. vials, each c.c. containing 1,000 million killed colon of sodium chloride; also marketed in packages communis bacteria suspended in physiological solution of one 10 c.c. vials and in packages of one 20 c.c. vials. Beebe Laboratories, Inc., St. Paul, Minn.

ACNE BACTERIN MIXED No. 10-BEEBE.—A mixed bacterial vaccine (see New and Nonofficial Remedies, 1920, p. 295) marketed in packages of six 1 c.c. vials, each c.c. containing 500 million killed *B. acni vulgaris*, 1,000 million killed *staphylococci albi* and 500 million killed *staphylococci aurei* suspended in physi-

ological solution of sodium chloride; also marketed in 10 c.c. vials and in 20 c.c. vials. Beebe Laboratories, Inc., St. Paul, Minn.

ADALIN TABLETS 5 GRAINS.—Each tablet contains 5 grains of adalin (see New and Nonofficial Remedies, 1920, p. 63). Winthrop Chemical Co., New York.

VERONAL SODIUM TABLETS 5 GRAINS.—Each tablet contains 5 grains of veronal sodium (see New and Nonofficial Remedies, 1920, p. 84). Winthrop Chemical Co., New York.

NOVASPIRIN TABLETS 5 GRAINS.—Each tablet contains 5 grains of novaspirin (see New and Nonofficial Remedies, 1920, p. 248). Winthrop Chemical Co. (*Jour. A. M. A.*, Jan. 15, 1920, p. 179).

PHENETSAL.—**SALOPHEN.**—The salicylic acid ester of acetaminophenol. The actions of phenetsal resemble those of phenyl salicylate (salol). It acts as an antirheumatic, antipyretic, antiseptic and analgesic. Phenetsal is white, odorless and tasteless. It is almost insoluble in water.

SALOPHEN.—A brand of phenetsal complying with the N. N. R. standards. It is supplied as powder and as Winthrop tablets of salophen 5 grains. Winthrop Chemical Co., New York.

SALOPHEN.—A brand of phenetsal complying with the N. N. R. standards. Morgenstern & Co., New York.

CINCHOPHEN-CALCO TABLETS 7.5 GRAINS.—Each tablet contains 7.5 grains of cinchophen-Calco (see New and Nonofficial Remedies, 1920, p. 225). Calco Chemical Co., Bound Brook, N. J.

PROCAINE-SQUIBB.—A brand of procaine (see New and Nonofficial Remedies, 1920, p. 29) complying with the N. N. R. standards. Procaine-Squibb is supplied as a powder, as hypodermic tablets procaine-Squibb $\frac{3}{4}$ grain, and as solution tablets procaine-Squibb $1\frac{1}{8}$ grains. Squibb & Sons, New York.

GLOBULES BENZYL BENZOATE-H. W. & D.—Each gelatin capsule contains benzyl benzoate-H. W. & D. (see New and Nonofficial Remedies, 1920, p. 49) 5 minims, diluted with olive oil. Hynson, Westcott & Dunning, Baltimore, Maryland (*Jour. A. M. A.*, Jan. 22, 1921, p. 245).

PROPAGANDA FOR REFORM

GLOVER'S CANCER SERUM.—In an envelope bearing the name "T. J. Glover, Research Laboratory, Toronto, Canada," but mailed, apparently from New York, physicians are receiving "literature" about Dr. Glover's Cancer Serum. This is stated to be a serum from immunized horses "between the ages of seven and nine years, of the roan type," and is claimed to have a specific action on every known type of cancer. The advertising offers to send the serum on receipt of price. While this would indicate that the Glover Research Laboratory had received a permit from the U. S. Public Health Service licensing the interstate sale of the serum in the United States, no such license has been issued (*Jour. A. M. A.*, Jan. 1, 1921, p. 52).

DIPHTHERIA ANTITOXIN AND DIPHTHERIA BACILLI.—The well established curative properties of diphtheria antitoxin must not be confused with its possible value as a prophylactic against the disease. Attempts have been made to apply diphtheria antitoxin locally in the pharynx and nares with the hope of eradicating the objectionable micro-organisms that may have found lodgment there. Recent investigations to determine the effect of diphtheria antitoxin in preventing lodgment and in growth of the diphtheria bacilli in the nasal passages of animals were entirely negative (*Jour. A. M. A.*, Jan. 1, 1921, p. 41).

PHARMACEUTICAL BARNUMS.—The exploiter of nostrums to the medical profession, realizing that at least a pretense must be made of giving the composition of medicaments offered to the physician, declares that his clay poultice has for its base "anhydrous and levigated argillaceous mineral." This sounds much more imposing than "dry and finely powdered clay," and satisfies by its very sonorousness. Now comes a product exploited chiefly to members of the dental profession, but also, it seems, to physicians. These are "activated" tablets which are "an anodyne, analgesic, febrifuge sedative, exercising (sic) antineuralgic and antirheumatic action." Their composition is stated to be "an activated, balanced combination of the mono-acetyl-derivative of para-amidophenetol together with a feebly basic substance in the alkaloidal state from the Thea-Sinen-sis." This means nothing more than acetphenetidin (phenacetine) and caffeine (*Jour. A. M. A.*, Jan. 1, 1921, p. 42).

ECHINACEA.—Intelligent members of the medical profession must be well aware that both the Pharmacopoeia of the U. S. and the National Formulary include many products that can scarcely be justified as medicinal on the basis of scientific consideration. Among the products included in the National Formulary is the fluid extract of echinacea. In 1909 a report of the Council on Pharmacy and Chemistry denied echinacea a place in New and Nonofficial Remedies because there was no evidence to show that it possessed therapeutic value. Despite this, echinacea is used extensively. The fluid extract and the tincture are made in enormous quantities, and the root enters into the composition of a large number of "patent," proprietary and non-secret mixtures. For this reason Couch and Giltner of the U. S. Bureau of Animal Industry made an extensive experimental study of echinacea therapy. Animal experiments designed to determine whether the drug possessed the properties that are ascribed to it gave negative results in every instance (*Jour. A. M. A.*, Jan. 1, 1921, p. 39).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Dermacilia Eye Remedy and Ointment (The Dermacilia Manufacturing Co.), the first falsely claims to be an effective treatment and cure for sore eyes of all forms, the second falsely claimed to be effective for all skin and scalp affections and for all kinds of eczema. Roger's Liverwort, Tar and Canchalagua (Williams Manufacturing Co.), falsely and fraudulently recommended for treatment of consumption, asthma, whooping cough, influenza, etc. Valesco (Alhosan Chemical Co.) falsely and fraudulently recommended as a remedy for tuberculosis, asthma, pneumonia, etc. (*Jour. A. M. A.*, Jan. 1, 1921, p. 52).

SERUMS AND VACCINES IN THERAPY.—In the development of serums and vaccines, scientific investigation and experimentation have preceded clinical tests of those products which have proved of permanent worth. Whenever the clinical use of serums and vaccines has proceeded beyond well established facts determined by laboratory research, the result has usually been disappointing. To submit a serum or vaccine for clinical trial without successful preliminary laboratory investigation of its probable worth is an imposition on the profession. The success of diphtheria antitoxin and antityphoid vaccine has prejudiced the profession and public in favor of vaccines and serums so that they are willing to accept a new serum or vaccine simply because it is a serum or vaccine. In his introduction to a series of articles on serum and vaccine therapy which is now

being published by the Council on Pharmacy and Chemistry, Flexner points out that in only a few instances has the anticipation been realized that a curative antiserum for each disease would be discovered. The history of antipneumococcus serum affords a striking example of the difficulties and pitfalls that are encountered in the development of remedies of this class. Thus far only one therapeutically active serum, Type I, has been developed, and this serum is not effective against infections by other types of pneumococci. Despite this, we are being offered today for clinical use "polyvalent" antipneumococcic serums recommended by the makers for the use in all types of pneumococcus infection (*Jour. A. M. A.*, Jan. 8, 1921, p. 115).

INHALATION THERAPY.—The possibility of effecting absorption of many drugs, other than the anesthetics, by inhalation is beyond question. Mercury, for example, has been so administered. The difficulties that attend such a procedure relate in particular to the uncertainties of accurate dosage. It has lately been demonstrated that calcium chloride solutions can be nebulized for inhalation so that the salt is absorbed from the respiratory tract. Since absorption of calcium from the alimentary tract is slow, indefinite and undependable, while subcutaneous or intravenous administration is objectionable or impracticable or both, attention becomes directed to the inhalation method of administering calcium. However, while small quantities of calcium are of dubious value, recent investigations indicate that the administration of larger amounts by inhalation methods is liable to exceed the limits of advisable concentration in the blood without any suitable mode of regulation. These findings may be a timely warning at a period when therapeutic novelties are likely to be proposed in increasing numbers (*Jour. A. M. A.*, Jan. 8, 1921, p. 116).

MORE MISBRANDED VENEREAL NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities on the ground that the curative claims made for them were false and fraudulent. Saxon Gonorrhea Injection (Saxon Co.) represented as a treatment, remedy and cure for gonorrhea, gleet and the prevention of stricture. Santalets (Sharp & Dohme), represented as a treatment, remedy and cure for gonorrhea, gleet, catarrh of the bladder—acute or chronic—whether due to gonorrheal infection or other causes. Specific Globules No. 37-77 (Sharp & Dohme), claimed to be an improved combination for the treatment of gonorrhea and its complications. Methylets (Sharp & Dohme), claimed to be of great value in all forms of urethritis, especially gonorrheal and allied varieties. Saxon Methygon Tablets (Saxon Co.), claimed to be a reliable remedy for treating gonorrhea and gleet. Columbia Short Stop (Columbus Drug Co.), recommended for "gonorrhea, gleet, running range, inflammation of the kidneys and bladder." Allan's Compound Extract of Sarsaparilla with Iodide (Allan-Pfeiffer Chemical Co.), claimed to be the best known remedy for syphilis, a powerful purifier of the blood and to have other curative effects. Bonkocine (J. E. Gasson), sold with the claim that "well-defined cases of gonorrhea yield to treatment in one to five days, chronic gonorrhea and gleet in five to ten days, provided they are not complicated with stricture or enlarged prostate gland" (*Jour. A. M. A.*, Jan. 8, 1921, p. 126).

TONA-VIN.—To those familiar with nostrum advertising, the advertisements which have appeared in newspapers for "Tona-Vin" made it fairly easy to classify the product as probably belonging to the class of alcoholic nostrums that are being born over night in order to meet—or beat—the exigencies of

the prohibition law. According to the label the preparation contains "soluble iron and quinin, fluid extract of senna leaves, wild cherry and aromatics." The A. M. A. Chemical Laboratory analyzed Tona-Vin and reported that it is a dark-brownish liquid, having an odor like wild cherry and wine and a slightly bitter, somewhat sour taste. The presence of 18 per cent. of alcohol is declared on the label. The analysis demonstrated that the amount of quinin was so small that, to obtain a single tonic dose of quinin, it would be necessary to drink the contents of about 1.4 bottles of the preparation. The chemists further found that, to obtain an average dose of iron, the individual would be obliged to drink the contents of an entire bottle of Tona-Vin. When one ounce was dealcoholized and swallowed by a healthy man, no effect except a doubtfully laxative action was noted. Evidently Tona-Vin is not sufficiently medicated to prevent its use in moderate amounts as beverage. There is, of course, no legitimate reason for administering such drugs as iron and quinin and senna, in ridiculously small doses, in a menstruum containing 18 per cent. of alcohol (*Jour. A. M. A.*, Jan. 15, 1921, p. 193).

POLYVALENT VACCINES FOR COLDS.—At least five commercial manufacturers of biologic products make and push the sale of vaccines to prevent colds. Of these at least two, from time to time, have added new strains of bacteria to the formulae with which they originally introduced their products, so that seventy-five or eighty different types of bacteria are now included. Every year different types, varieties and species of bacteria have been associated with colds in different parts of the country. Presuming—although it has never been proved—that any vaccine has value in preventing colds, the logical thing to do is to prepare a specific vaccine for each form of cold in each part of the country. Commercially it is much more profitable to mix all the bacteria together, to prepare a vaccine and to inject this into the patient in the hope that some organism will produce antigens which will find their mates. The present-day shotgun biologic mixture is more ridiculous than the old shotgun proprietary—and a greater menace to public health and to scientific medicine (*Jour. A. M. A.*, Jan. 15, 1921, p. 182).

SPIROCID NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Spiroicide is advertised as a new and successful treatment of syphilis by fumigation and inhalation. The product is furnished in the form of tablets which are stated to be composed of metallic mercury, copper sulphate, cypress cones, henna, nutgall and dried pomegranate. Experiments in the A. M. A. Chemical Laboratory showed that when the tablets are ignited the organic constituents are consumed, the mercury is volatilized and most, if not all, of the copper remains behind. For use, the patient sits on a chair, the tablet is ignited, and the patient is covered with a sheet so that he will inhale the mercury vapors produced. The Council obtained the opinion of syphilographers with regard to the evidence submitted by the Spiroicide Corporation, which markets the product, and as to the advisability of giving recognition to a method for the administration of mercury by inhalation. In consideration of the opinions expressed by its consultants, the Council declared Spiroicide inadmissible to New and Nonofficial Remedies because, first, the claims made for it are unproved and unwarranted; secondly, the routine use of an inexact method for the administration of mercury is detrimental to sound therapy; and, thirdly, the name is not descriptive of the composition, thus failing to remind the physician who uses the pastils that he is administering metallic mercury (*Jour. A. M. A.*, Jan. 22, 1921, p. 259).

HELMITOL OMITTED FROM N. N. R.—Helmitol is hexamethylenamin methylencitrate. It was introduced with the claim that it was superior to hexamethylenamin (which acts in acid fluids only) in that it is equally efficient whether the urine is alkaline or acid. In 1918 the Bayer Company, which then marketed the product in the United States, was notified that the Council on Pharmacy and Chemistry questioned the claims and desired evidence for their substantiation. In 1919 the same notification was sent the Winthrop Chemical Company, which in the meantime had secured control of the product. Pending the submission of evidence, the Council continued Helmitol in New and Nonofficial Remedies with the statement that the action and uses were those of hexamethylenamin. Now the Council on Pharmacy and Chemistry announces that Helmitol has been omitted from New and Nonofficial Remedies for the reason that the claims under which it was introduced have been disproved by P. J. Hanzlik, who demonstrated that the alkalinity required to split off formaldehyd from helmitol is greater than exists in urine, even in the advanced ammoniacal fermentation (*Jour. A. M. A.*, Jan. 22, 1921, p. 260).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Benetol Suppositories (Benetol Co.), misbranded in that unwarranted therapeutic claims were made for them. Vinol (F. Stearns & Co.), misbranded in that false and fraudulent claims for curative effects were made for it. Mir-A-Co (Mir-A-Co Co.), sold with false and misleading statements regarding its composition and with fraudulent therapeutic claims. Novita Globules; Novita Capsules; Novita Salve, Stainless; Novita Salve, Brown (Novita Co.), misbranded in that the therapeutic claims were false and fraudulent. Pepso-Laxatone (Burlingame Chemical Co.), adulterated in that it did not contain diastase or pancreatin as claimed and that the therapeutic claims made for it were false and fraudulent. Alkano (Alkano Remedy Co.), offered under false and fraudulent therapeutic claims (*Jour. A. M. A.*, Jan. 29, 1921, p. 326).

BIOLOGIC THERAPY.—The various problems, the contradictory opinions and the commercialization of biologic therapy, induced the Council on Pharmacy and Chemistry to appoint a committee to prepare and publish an authoritative review of this subject. The object of the series, which has now been published, was to present to physicians concise, authoritative statements concerning indications, contraindications, methods of administration, dosage, value and possible danger of serums, vaccines and non-specific proteins in the treatment of infectious diseases (*Jour. A. M. A.*, Jan. 29, 1921, p. 318).

FOREIGN PROTEIN THERAPY.—While striking clinical changes, sometimes to the apparent profit of the patient—but sometimes decidedly otherwise—may follow the injection of foreign protein, it is generally agreed that the method lacks the requisite amount of carefully controlled observations which would entitle it to acceptance as an approved procedure for general use. Most serious is the attempt of pharmaceutical houses to push the use of alleged specific methods of treatment, which the thinking physician will at once realize are methods of inducing protein shock. Research with such products in laboratories and in hospitals under suitable control may be permissible, but indiscriminate use in general practice is a far different matter (*Jour. A. M. A.*, Jan. 29, 1921, p. 315).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., APRIL, 1921.

NUMBER 4

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3529 Pine St., St. Louis, Mo.

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ORIGINAL ARTICLES

THE CLINICAL SIGNIFICANCE OF LOW BLOOD PRESSURES*

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The frequency with which low blood pressure is associated with vesiculo-prostatitis in the male, and with some disturbance of the ovarian function in the female, has tempted me to dogmatize and say that low blood pressure is practically always accompanied by some lesion in the genital tract. There is further reason for this, even in the case of cachectic states, for in them the nutrition of the endocrin glands would be reduced and there would be some deficiency in their action.

The literature on the subject however has not emphasized the genital sphere as much as it has the constitutional elements. But temperament and constitution are large terms, and to be useful to us must be resolved into their elements. And I am not so sure but that the one important element of temperament and constitution, when regarded from the permanent standpoint, is the condition of the sex glands.

In the study of the blood pressure of any given patient, it is first of all essential to ascertain whether that low blood pressure is a temporary or a permanent condition. For example: when one notes low blood pressure in beginning pregnancy one should try and ascertain if there has been a history of low blood pressure preceding that pregnancy; and in the same way, if one finds low blood pressure succeeding influenza it is important to ascertain, if possible, whether such a low blood pressure was evident before the attack of influenza. Only in this way can we evolve a syndrome of essential or constitutional low blood pressure that is worth while, for the description of constitutional low blood pressure, as given by

Martinet under the title of hyposphyxia, might be applicable to many patients, who if examined a month or two later would exhibit a far different condition.

In support of the sex gland theory might be adduced an experience of the examiners of the students of the University of California, who found that during the child bearing period the blood pressure of the women was lower than it was later on in life. But the analogy cannot be pressed too far, and the crux of the matter appears in the question whether the general or constitutional condition is the cause and the function of the endocrin glands the result. For example: A learned colleague of mine maintains that the basis of these low blood pressures lies in the smallness of the heart and the weakness of the cardiac muscle, i. e., a congenital and constitutional condition.

Henry Sewall of Denver believes that in the absence of a known focal infection we must suppose the presence of an occult tuberculosis. This theory has a great many facts in its favor. But here again the question arises whether the tuberculosis results from the general condition or the general condition results from the tuberculosis.

In the same way, as with tuberculosis, there are other intermediate conditions which may or may not have a causal relation to the low blood pressure. For example: In my practice one of the most frequent findings has been the infiltration of the pulmonary roots to such an extent that pulmonary symptoms were observed. This infiltration has been usually the residual condition from pneumonia, influenza, or similar respiratory disease. I interpret the condition as being an intermediate one; that is, the toxic influence of the disease has so weakened the system that it could not throw off the residual effects; rather than that the condition as we see it is the cause of the low blood pressure and the other constitutional effects.

Again, we see a similar intermediate condition in the atony of the digestive tract. We

*Substance of a paper read before the Jackson County Medical Society, January 18, 1921.

very frequently find gastric succussion and colonic stasis. But the improvement in these conditions that appears as soon as the patient's strength is increased, makes it evident to me that here also the constitutional condition is the primary one and the local symptoms are simply some of the residual effects.

An argument in favor of the constitutional theory of Martinet is the fact that low blood pressures are occasionally inherited; that is, we will find two or three members of a family exhibiting low blood pressures and marked asthenia. In these cases it is exceedingly difficult to make more than a temporary improvement in the condition, whereas in cases of low blood pressure resulting from infectious disease, one can raise the blood pressure and bring the patient back to an efficiency basis by appropriate stimulant and tonic treatment.

Some evidence in the matter of the relation of the constitutional diathesis to the temporary organic or functional dyscrasias is to be obtained from the effect of the therapeutic doses of the extracts of the ductless glands. Following out this idea we find that when we administer pituitary extract our patients fall naturally into two groups. In the first group there is little or no effect. The other group is made to feel very much better—their blood pressures are raised and after a time one notes a gradual return to an efficiency basis. To my way of thinking, the first group are those which should be classified under the head of essential low blood pressures or the constitutional hypophyxia of Martinet. The other group are those whose resistance has been lowered and whose endocrin equilibrium has been broken by some exhaustion either through prolonged exertion or through serious infectious disease. The exhibition of the other glandular extracts does not give so much information. The use of the thyroid is generally without any effect.

When we turn to the literature we find a grouping of the theories of causation in three standard classes. For example, we have the theory that low blood pressure indicates exhaustion of the suprarenal glands. This theory had its most valiant proponents in Josué and Belloir in France in 1914-16. They compare the weights of the heart with that of the adrenals and find that in cases of low blood pressure the adrenals are below the weight demanded by the normal relation. That is, the normal heart should be thirty times the weight of the combined adrenals (the extremes are 1 to 15 and 1 to 50). For example, they found a heart of 785 grams with the adrenals totaling 8 instead of 28 grams. Cases of this type show the white line of Sergent and are improved by the therapeutic administration of adrenalin. But the theory is opposed by the greater number of writers, of whom Porak

is perhaps the latest (1918). In my own work the proportion of cases pointing to suprarenal insufficiency is very small.

The second theory of causation is that alluded to above when speaking of the writings of Sewall, namely, that tuberculosis is at the basis of practically all low blood pressures. In France this theory is fathered by Sézary and Porak. In my own work I have found a few cases where the low blood pressure persisted and later on the patient showed the evidence of an active tuberculosis. But, as I said above, I have never felt quite convinced but that the constitutional condition is the primary one and the tuberculosis merely secondary.

The third theory is that there is a substance generated in the body which depresses the vasomotor system and produces these low blood pressures. This substance is cholin, an organic base derived from trimethylamine, which was discovered by Strecker in 1862. In the body cholin usually is formed by the disintegration of lecithin. Halliburton and Mott demonstrated in 1899 that cholin causes a fall in blood pressure. Desgrez and Chevalier noted in 1908 that this fall was due to the vasomotor dilation of the vessels of the intestinal area. They found that cholin appeared to neutralize adrenalin. Gautrelet went so far as to classify the glands of the body into two groups—those producing cholin and those producing adrenalin (the chromaffine group). But this theory fell to the ground when Modrakowsky in 1908 and Busquet and Pachon in 1909 made a pure synthetic cholin—for this substance lacked all the depressant powers of the preceding samples of the drug. The depression therefore apparently was due to the decomposition products, such as muscarine and neurine.

The matter therefore remains unsettled and at present our medical writers may be grouped roughly into three classes: First, those who believe that low blood pressures are mostly congenital and due simply to the smallness and weakness of the cardiac muscle and the vasomotor system. If we accept this view there is no particular outlook in the way of therapy for these unfortunates except the reduction of their output of energy.

A second group are those who believe that low blood pressures are the result of toxins generated by infectious diseases. This group of men of course seek to clear the body from all focal infections, and their results are favorable enough to encourage them in that belief.

A third group consists of those who believe that the low blood pressure is due to an exhaustion of the endocrin glands. This exhaustion may be due in its turn to the presence of infectious diseases, among which may be mentioned tuberculosis. Or it may be due to extreme exposure and over-strain. In support

of this view is the experience of the physicians connected with our army in the late war who observed that following severe exhaustion, either from exposure or disease, there was a period of low blood pressure, perhaps three or four weeks long, followed by the compensating one with the pressures going up usually to 160 systolic and 100 diastolic accompanied by pollakisuria and other evidence of an over-stimulated vasomotor system. This in turn yielded in two or three months to a return of the normal condition of the vasomotor system.

Summarizing then my observations and reading, I conclude that a blood pressure below 100 mm. of mercury, systolic, is abnormal, and that it indicates a lower efficiency of the blood. There are two types of low blood pressure: the one due to congenital conditions (the so-called temperament, diathesis, or constitution); the other due to endocrin exhaustion (this exhaustion being due to infectious diseases or over-exhaustion and exposure). Of the endocrin glands the ones most usually affected are those of the genital sphere. The adrenals occasionally show involvement but more usually it is the thyroid, and still less frequently the pituitary.

In the constitutional group there is usually present a small heart (the hypotrophy of the French) with a poor circulation so that the hands and feet are usually cold and livid. The relation of muscular tissue to total weight of the body shows to the disadvantage of the muscular. This type of patient usually develops a visceroptosis.

The management of these cases demands therefore a differential diagnosis between the two groups, and in the case of the congenital group an explanation to the patients of the mode of life necessary for them if they are to be even relatively efficient. In the other group of cases a patient search needs to be made for occult infections, and if these can be removed and an efficient tonic therapy instituted, the outlook for a return to the normal is good.

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**ANEURYSM OF THE FEMORAL ARTERY, WITH
REPORT OF A CASE OPERATED BY THE
MATAS METHOD OF OBLITERATIVE
ENDOANEURYSMORRHAPHY***

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The classical paper of Matas of New Orleans in 1902 on the treatment of aneurysms by the method of endoaneurysmorrhaphy gave a

decided impetus to our interest in this subject.

In order to refresh our knowledge of the subject it may not be out of place to refer briefly to the history of aneurysm, its etiology, symptoms, pathology, and the evolution of its treatment.

Our knowledge of aneurysms dates back to the time of Galen (131-201 A. D.) who recognized two forms, one from dilatation, the other from the wounding of a vessel. Antyllus toward the end of the third century A. D. wrote much on the subject. He recognized the two forms described above and devised an operation which bears his name and which is one of the classical operations at the present time. It was not until the sixteenth century that further progress was made by the recognition of aneurysms of the internal arteries. Vesalius (1514-63) was the first to diagnose clinically aneurysm of the thoracic and abdominal aorta. Ambroise Pare in the same period recognized different types of aneurysms and first suggested the relations of aneurysms with syphilis. Lancisi, a distinguished Roman physician, wrote the first great monograph on the disease in 1728. The literature of the eighteenth century is rich in contribution to the subject. Morgagni in 1761 described many interesting cases with the post-mortem appearance. Wm. Hunter in 1751 made an important contribution on the subject of arterio-venous aneurysm. Scarpa in 1804 was the first to lay special stress upon the importance of the media in maintaining the strength of the vessel. This was followed by works of Rokitan-sky (1852), Helmstedter (1873), and Koster (1875), on the same subject; also by the work of Eppinger (1887) who regarded as the primary event the rupture of the media, particularly the elastic elements, and the work of Thoma who brought his theories of aneurysm into line with his well-known views on arterio-sclerosis. During the past few years the old views of Pare, Morgagni and others on the influence of syphilis as a cause of the disease has been amply confirmed. The studies of Benda (1904) and of Chiari (1904) give full summaries of the recent work on mesaortitis in relation to syphilis and aneurysm.

Description.—Forms of aneurysm, and vessels most frequently involved. An aneurysm is a pulsating tumor filled with blood and communicating with the lumen of an artery.

There are two principal types of aneurysm—the true and the false. A true aneurysm is one in which the sac is formed by one or more of the coats of the artery; while a false aneurysm is one whose sac is formed of a condensed perivascular tissue and contains no arterial coat. A true aneurysm usually follows from disease of the vessel wall. It may be

*Read before the St. Louis Association of Surgeons, June, 1920.

saccular, fusiform, or dissect in character, but may rupture and become diffused. A false aneurysm usually follows a trauma and may be circumscribed, diffused, or may connect with a vein forming an arteriovenous aneurysm.

Aneurysms are named from the artery involved, as popliteal, carotid; also from the cavity of the body in which they occur, as thoracic, abdominal, etc. They all present certain clinical phenomena in common; (1) the development of an elastic pulsating tumor which is diminished in size by pressure on the tumor or the artery on the proximal side of it and increased in size by pressure upon the artery on the distant side; (2) aneurysmal bruit heard over the tumor; (3) signs of pressure, as absorption of neighboring parts and tissues, even bone; (4) pain and paralysis from pressure by the tumor on adjacent nerves.

Frequency of aneurysm in different vessels as shown by the study of Crisp: Pulmonary artery, 2; thoracic aorta, 125; abdominal aorta, 59; common iliac, 2; external iliac, 9; gluteal, 2; femoral, 66; popliteal, 137; posterior tibial, 2; innominate, 20; carotids, 25; intracranial, 7; temporal, 1; ophthalmic, 1; subclavian, 23; axillary, 18; subscapular, 1; brachial, 1; total, 501.

Results of aneurysm if left untreated are as a rule progressive from bad to worse. The walls become thinner and weaker, the sac ultimately gives away and, in the case of large vessels, fatal hemorrhage ensues. A spontaneous cure, a rare termination, may take place by the gradual deposit and subsequent consolidation of laminated coagula. The artery below the sac may be plugged by an embolus, or irritation of the sac may cause coagulation within.

The Causes of Aneurysm.—Arteriosclerosis or atheroma is the predisposing cause combined with increased blood pressure from severe muscular exertion, chronic interstitial nephritis, alcoholic excess, and syphilis. Arterial disease is most common in larger vessels, and in the aged, but may occur in youth. Infected emboli, parasites, and suppuration around a vessel weakens its coat and tends to aneurysm. A bruise, cut or puncture of a healthy artery may lead to the development of an aneurysm.

Diagnosis.—The diagnosis is not always easy but can usually be made from the presence of an expansile pulsating tumor; the aneurysmal bruit; the disappearance of the tumor from proximal pressure on the artery, and the pressure symptoms that usually result.

Treatment.—The surgical treatment of aneurysm dates back from the time of Antyllus, who devised the operation of ligation of the artery above and below the sac with incision or excision of the sac. While in the main the treatment of aneurysms is surgical,

medicinal and dietetic treatment have produced results in a few cases. Treatment by pressure either on the artery or sac has also sufficed to cure.

Operative treatment may be divided into (1), simpler procedure done without anesthetics for the purpose of producing a coagulum in the sac, and (2) major operations such as ligation of the artery or suture of the sac.

Under the former minor operations may be mentioned the injection of an astringent liquid, needling the sac; the insertion of a fine aspirating needle and the pushing through into the sac of a large quantity of silver wire in the hope that it will aid in whipping out fibrin; also electricity or electrolysis.

Under major operations may be mentioned the various forms of ligations of the main artery and the Matas operation which is the method of choice in all aneurysms of the extremities.

The first form of ligation was that described by Antyllus in the third century. He ligated the artery above and below the sac; the sac was then opened and the clot turned out. Extirpation of the sac was advocated by Philagius and later revived by Purmann in 1699.

Anel in 1710 advocated proximal ligation close to the sac. This is only used in traumatic aneurysms. John Hunter in 1786 devised the modern method of ligation which is proximal ligation of the artery some distance from the sac, so that collateral branches are given off between it and the ligature. Distal ligation was practiced by Basedor in 1760 and Wardrop in 1825.

The first suture of an artery was performed by Lambert an English surgeon in the latter part of the eighteenth century. Murphy, Carrell and others sutured arteries in continuity but it remained for Matas to describe the modern operation of endoaneurysmorrhaphy. He first performed the operation in 1899, although it was not until 1902 that he reported his results in four cases. The operation in brief consists in opening the sac (the circulation having been controlled by a tourniquet), and suturing the opening of the parent arteries and any of the collaterals. No attempt is made to reconstruct the parent artery unless the artery is of the sacculated type.

The Matas operation differs notably from the Antyllus operation in the fact that it saves certain collaterals which the Antyllus operation destroys, and the retention of these collaterals may prevent gangrene in the limb. It differs from it further in the fact that it occludes certain small vessels which often in the Antyllus method continue to convey blood into the sac. It is superior to extirpation because it does not destroy the vascular walls of the

sac, the blood vessels of which, if unblocked, aid in preventing gangrene.

Matas points out that suture of an aneurysm is indicated only when certain essentials exist, viz.:

1. The situation of the aneurysm must admit of the control of the circulation temporarily on the proximal side.

2. The sac must be freely opened in a longitudinal direction; its walls must not be dissected and must be separated as little as possible from the surrounding tissue.

3. Every orifice opening into the sac must be thoroughly exposed so that all can be closed by sutures.

Out of a total of 85 cases reported by Matas in the *Jour. Am. Med. Assoc.*, November 14, 1908, there were 78 recoveries, 8 post-operative deaths, 2 cases of secondary hemorrhage, 4 cases of gangrene and 4 relapses (all of them from reconstructive operations).

The vessels involved were: Abdominal aorta, 2; external iliac, 1; gluteal, 1; ilio-femoral, 5; femoral, 18; popliteal, 50; posterior tibial, 1; external tibial, 1; subclavian, 1; subclavio-axillary, 2; axillary, 1; brachial, 2; total, 85.

My experience with the method is confined to one case which was a perfect success and confirms the views of many others, most of whom have operated on only a few cases. Out of the 85 cases reported by Matas there were 59 operators.

On December 7, 1912, T. G., colored, aged 40, stableman, entered the St. Louis City Hospital with the following history: Eight weeks before he developed a pain in the left leg. It was made worse by moving the leg and was more painful during the night. No joints were involved. He noticed a small lump on the inner side of the left thigh at the junction of the middle and lower third, about the size of a half dollar, which was firm on pressure and caused little pain. He noticed that the handle of the shovel which he used always seemed to press on his leg at this point. The tumor increased in size until at present it is about four inches in diameter, circumscribed and somewhat indurated. Pressure caused pain. Family history was negative. He stated that he drank beer and whiskey; used no drugs; tobacco in moderation; slept well; appetite was good and bowels constipated. He was married 19 years ago and lived with wife one and one-half years. There were no pregnancies; his wife was in good health; he denied gonorrhea; he has had sores on his penis several times, the last time six years ago; his health was always good; he had malaria 13 years ago; he lost the sight in his right eye seven years ago; his eye was sore for three or four years, gradually growing worse and finally sight was lost.

Physical examination showed a fairly well developed and nourished negro. There was an opacity of the cornea of the right eye; his tongue was clear; his teeth were in fair condition; his heart and lungs were negative. The urine was acid, 1.021; no albumen or sugar was present. At the junction of the middle and lower third of the left leg was a tumor, four inches in diameter, circumscribed, somewhat indurated, and painful on pressure. A decided im-

pulse, expansile in character, could be made out. A distinct bruit or murmur could be made out on auscultation over the tumor. The pulse in the leg was not made out. The Wassermann on December 19, 1912, was four plus.

A diagnosis of aneurysm of the femoral artery was made, and the patient was referred to me for operation.

On December 21, 1912, under ether anesthesia the operation was undertaken. The circulation of the leg was controlled by an esmarch bandage above the tumor. A longitudinal incision over the most prominent part of the tumor was made, the blood clot turned out and all lamina removed. We then found that we were dealing with a false aneurysm; there was no vessel intima except at the proximal and distal openings of the vessel which was plainly seen separated about one and one-half inches. A reconstruction of the artery was impossible and the obliterative type of operation was performed. The openings in the artery were closed by means of several sutures of chromic cat gut passed after the manner of Lembert. The tourniquet was then removed and the suture was found to control the circulation perfectly. The femoral vein which was exposed to view distended gradually and circulation apparently was in no way interfered with. The dead space was obliterated by pulling the muscles together over the vessel. A piece of rubber dam was left in the lower angle of the wound. There was no difference in the temperature of the feet that day nor following.

Convalescence was uninterrupted by any unfavorable symptoms. The patient was up in a chair December 30, 1912. He walked about the ward January 2, 1913, and was discharged on January 16, 1913. The note on that day was that patient felt fine. Healing was complete. Some induration in the region of the scar but no pulsation could be felt.

He was seen the latter part of December, 1913, and a thorough examination of the leg showed no signs of aneurysm. Pulsation could be felt in the tibial vessels at the foot.

Lister Building.

A COMPARISON OF THE INFLUENZA EPIDEMIC OF 1918 WITH THAT OF 1920 AT THE UNIVERSITY OF MISSOURI

D. G. STINE, M.D.

COLUMBIA, MO.

The sudden disappearance of influenza last winter left us with an understanding of its clinical pathology that was still vague. It is interesting, however, to compare our views formed during the fall of 1918 with the deductions our more mature observations have enabled us to draw from the recent epidemic.

The University of Missouri opened the 30th of August, 1918, with 2,706 students. Of this number 1,185 were non-military students, mostly women. These were housed in boarding, fraternity and sorority houses. The rest, 1,521, were soldiers enrolled in various branches of the Student Army Training Corps. These were housed in barracks.¹

1. The description of the epidemic of 1918 is taken from an unpublished paper written December, 1918.

The usual hospital facilities for the care of these students were a thirty-bed student infirmary, a nursing staff made up of four graduate nurses and thirteen pupil nurses, and the staff of The Student Health Service made up of a surgeon, a specialist in eye, ear, nose and throat, and an internist.

About the 20th of September it was obvious that a nation-wide epidemic of some severe respiratory disease was invading the State of Missouri. On September 26th we admitted to the University Hospital our first cases. The University Health Committee, realizing that the facilities of the University Hospital would not meet the needs of the epidemic, rented a building and equipped an eighty-bed hospital. By October 8, these two hospitals were both crowded, containing 50 and 84 beds each. As we were able to add only three nurses to our nursing force, we were obliged to put on our nursing staff soldiers detailed for hospital duty to cover the need of both hospitals. On October 11 we opened another hospital of 125 beds and a fifty-bed hospital for women, as well as a forty-bed convalescent hospital. We had to weaken this same nursing personnel still further to man these hospitals.

From September 26, 1918, to December 6, 1918, we admitted 1,020 patients suffering from epidemic pneumonitis. Of this number 14 died; 11 of an extensive bronchlobular pneumonia, one of an acute cardiac dilatation, and two from post-febrile nephritis, making in all a mortality of 1.3 per cent.

Following the disappearance of influenza in epidemic proportions in December, 1918, we had 276 sporadic cases admitted to the Student Infirmary (Parker Hospital) during the early Spring and Fall of 1919. Most of these cases were mild, many so mild that the diagnosis was doubtful. Of this number, however, eight were pneumonias of the influenza type. Of those admitted as pneumonia, one of the conspicuous features was the varying degree of toxic shock from which they were suffering. A few (three) were admitted in a definite state of shock, i. e., subnormal temperature, very low blood pressure, mental apathy and motor restlessness. When these cases presented abdominal pain referred from the diaphragmatic pleura, the picture resembled that of a patient in shock, due to an acute abdominal emergency of a surgical nature.

In addition to these sporadic cases of acute influenza, we saw a number of chronic infections of the pulmonary structure, which we classified as "chronic influenza" although they may have been due to secondary invaders. These usually presented varying degrees of bronchiectasis and gave findings on physical and roentgenographic examination that we

learned to recognize as characteristic of this condition.²

The history of loss of weight and strength, cough, sputum (occasionally blood streaked), afternoon fever, and night sweats, the physical signs of localized areas of moisture and slight dullness, usually, but not always, over the lower pulmonary lobes posteriorly, gave a picture very easy to confuse with pulmonary tuberculosis, and great care was necessary to differentiate the two conditions. Even an x-ray of the chest was confusing.

On January 19, 1920, there opened in Columbia the Annual Farmers' Week, held under the auspices of the Agriculture College. More than 2,000 out-of-town guests attended and some of the exercises were well attended by students and faculty of all the Colleges of the University. Within three days cases of a very virulent type of influenza appeared among our guests, and soon a well-defined epidemic was under way in our student body.

Believing that those who had had the disease in the fall of 1918 would be immune and that the epidemic would be limited to the unimmunized, we prepared our student infirmary to care for 40 beds. We endeavored to fill these with the more seriously ill and the rest were taken care of by an out-patient service in their rooms.

During the first two weeks, the disease seemed to be almost as virulent as in the beginning of the epidemic of 1918. The percentage of pneumonias cannot be accurately given, as we reserved our hospital for the pneumonias and the out-patient records are incomplete.

In all, 265 were taken care of by the out-patient department and 84 in the hospital. Of this number two died (both farmer boys taking the eight weeks' short course in agriculture), one of multiple abscesses of the right lung affecting principally the lower lobe, and the other of a progressive bronchlobular pneumonia.

Etiology.—The infectious agent first attacks the mucous membranes of the upper respiratory tract and evidently there finds its portal of entry into the body. Of 140 blood cultures taken during the epidemic of 1918, from pneumonitis of all grades of severity (from so-called influenza to severe pneumonia) more than 70 per cent. gave an unmixed growth of a short-chained streptococcus (diplostreptococcus), the bacterial characteristics of which were not determined in our laboratories here. What seemed to be this same organism was found in pleural exudates and in numerous

2. Stine: Chronic Influenza. Jour. Mo. State Med. Assn., June, 1919.

post-influenzal purulent conditions about the nose, throat and ears.³

During 1918 more than half the University student body were living under wartime conditions, in barracks, and had been undergoing the usual intensive military drill for a few weeks. This was long enough, however, to have allowed an epidemic of some coryzal infection to have gone through the whole group, and to have disappeared before the first cases of influenza were seen.

The frequent appearance of this streptococcus organism as a secondary invader might be due to the establishment of a common oronasal flora due to the preceding coryzal epidemic.

In 1920 we realized that the nature of the virus that causes the influenza stage of the disease was still unknown to us. That it produces a potent toxin that reaches the whole body is evident, but a series of blood cultures taken on admission to the hospital, showed no bacterial growths. The streptococcus that was found so readily last year was absent.

For just how much of the pathological picture the influenza virus is responsible, and how much the secondary invaders, is still a matter to be settled in the laboratory. Is the damage done within the lung during the influenza stage due to toxin alone and does the invading organism remain as a descending infection of the respiratory tract? Are the consolidations that follow the hemorrhagic pneumonitis due to the unknown influenza organism, or to the secondary invaders? These questions cannot be solved until the bacteriologist determines the nature of the invading virus. It is hard to believe that a clinical picture so uniform could have any elements of chance complication included in it.

Morbid Anatomy.—As seen in 1918 the disease starts as an inflammation of the mucous membranes of the nose and throat, causing a purulent inflammation of the nasal sinuses, and quickly spreads down the respiratory tract to the finer bronchioles, giving the pathological picture of broncho-pneumonia, or whole lobules may be progressively consolidated (lobular pneumonia), or the lobules of one or more entire lobes may become consolidated so that the gross section may resemble lobar-pneumonia. Microscopical examination, however, shows the lobular arrangement of the consolidation.

Besides a very extensive bronchlobular pneumonia, autopsies showed a hemorrhagic gastro-enteritis, cloudy swelling of the liver and kidney and a splenitis. Cultures from lung tissue and heart's blood gave, during 1918,

a growth of the same diplostreptococcus described above. The leucocyte count showed a diminished, normal, or slightly increased count. The urine showed varying amounts of albumin, hyalin and granular casts, except where large doses of camphor were used. Patients receiving 90 or more grains of camphor a day showed very little kidney involvement. Albumin appeared in about 6 per cent. of all the cases receiving the routine dose of 36 grains every 8 hours.

The picture of the morbid anatomy as described above for 1918 is still the one we saw last winter. I want to emphasize, however, bleeding as a common symptom during the early days of the disease, not only epistaxis, but menorrhagia, petechial rashes, bleeding into muscular tissue, especially the recti abdomini, bleeding from the urogenital tract, hemorrhage of the gastro-intestinal tract, varying from the hemorrhagic gastro-enteritis found in every autopsy, to the vomiting of large amounts of blood, and tarry stools, and last, but most important, the hemorrhage of greater or less degree that probably takes place into the parenchyma of the lungs of the majority of cases. Le Count (*Jour. Amer. Med. Assn.*, March 10, 1919, 72, No. 9, p. 650) describes a microscopic disseminated necrosis of the pulmonary capillaries. In other words wherever capillaries come near to the surface, bleeding takes place, due, probably, to the destructive action of the toxin on capillary walls.

The outward signs of this bleeding into lung tissue varies from blood-streaked sputum to frank, profuse hemophthisis.

Areas of clotted blood, due to hemorrhage in the lung, present an excellent culture media for the growth of bacteria, and those inhabiting the upper respiratory tract would be the most probable invaders.

Clinical Features.—The period of incubation averages about 48 hours. The prodromal symptoms were sore throat, headache (usually frontal), dizziness accompanied by tenderness over the frontal sinuses, fainting, and aching of head, back and limbs. Often there was a conjunctivitis of one or both eyes before other prodromes appeared, which might suggest the eye as a portal of entry.

After a few hours of prodromal malaise there was a slight elevation of temperature. With the onset of the fever the patient presents a rather typical picture. The conjunctiva are reddened, the face is flushed, the tongue has a heavy white coat, the fauces and post-pharynx are slightly reddened, and there is an infrequent cough without expectoration. The most common subjective symptoms at this stage are pain, on motion, of the eye muscles, headache, photophobia, aching of back and limbs, and soreness of the throat and trachea.

3. Stine: Chronic Influenza. *Jour. Mo. State Med. Assn.*, June, 1919.

Physical examination of the chest shows numerous areas of subcrepitant râles, especially numerous over the lower back of both lungs. Areas of cog-wheel breathing over the same location are also early physical signs.⁴

The course of the disease from this point follows one of two courses, either an arrest of the progress of the symptoms and a gradual recovery, or an increase in the septicemia and toxemia, and an extensive invasion of the parenchyma of the lung. The signs of the latter are a further increase in fever—102 to 105 degrees F. The subjective symptom of pain is replaced often by a feeling of well being. There are hemorrhages (13.84 per cent.): from nose (13.6 per cent.), lungs (.06 per cent.), gastro-intestinal tract (.18 per cent.). In the severer toxemias, both motor and psychic restlessness were observed. A fine tremor of hand and face and a mental apathy are often the first evidence of an increasing toxemia. This may change to active delirium. Vomiting is one of the most frequent symptoms (43.8 per cent.), and diarrhea occasionally. This is evidently due to the hemorrhagic gastro-enteritis mentioned above. The cough is persistent and the sputum is tenacious and of a greenish yellow color, frequently blood-streaked. This usually later becomes rusty or like prune-juice in appearance. Expectoration is difficult and a maximum amount of cough does not empty the bronchii of their secretion. The pulse is persistently low compared with the temperature, and except in fatal cases, there is little or no increase in the respiratory rate, nor any marked cyanosis. The signs of a fatal termination are dyspnea, cyanosis and jaundice plus a rapid pulse and high fever.

The physical signs of this severer type of the disease are limited to the chest. Palpation sometimes shows areas of increased or diminished tactile fremitus. Percussion shows areas of dullness but gives no clue to the entire amount of lung damage. Auscultation gives more information. There are heard over the lungs, loud piping râles produced by the tenacious secretion in the bronchii. There are areas of diminished or lost breathing, due probably to the filling of the bronchii as well as the alveoli with fibrin, or blood clot, and areas of exaggerated or harsh breathing due to an emphysema of parts of the lung and areas of bronchial breathing.

This last sign is most frequently found over the lower back of the lungs, especially along their vertebral border. Bronchial breathing is frequently found in more than one place and on both sides of the chest, but the actual damage as mapped out by physical signs, is masked by the emphysematous condition of the unin-

involved lung tissue. Our autopsies showed a marked difference between the extent of damage as shown by physical signs and the real amount of consolidation.

The clinical picture describing the epidemic of 1918 will hold good for last winter, with the exception of the character of the fever. In 1920 the initial onset did not seem to be quite so severe, and the duration of the fever not quite so long, so that there was usually a sudden drop to normal or slightly above, in about 48 to 72 hours. This I take it, may mark the end of the phase of the disease due to the influenza virus. In a certain percentage of cases this was followed by a secondary rise of fever, often ushered in by a chill or chilly sensation, and this I believe may mark the development to the secondary invasion of the lung by the bacterial inhabitants of the upper respiratory tract which have been incubating in the hemorrhagic areas formed in the parenchyma of the lung during the initial toxemia.

The areas of absent breathing so commonly found over one or both lower backs of the chest, as mentioned above, are found early during the influenza phase and probably mark the areas of hemorrhage, especially as it is usually over these same areas that we find the areas of bronchial breathing and dullness that follow the second rise in temperature.

In discussing the clinical features of the disease, I want to call attention to the severe toxemia that sometimes accompanies the initial onset, producing more or less toxic shock with cyanosis, pallor and low blood-pressure, even in the presence of high fever. It is possible for the patient to die during the onset of the disease, due to this overwhelming intoxication.

Systolic blood pressures of between 70 and 85 mm. were common in the more severe cases upon entrance, and the picture of shock, as seen following surgical or traumatic insult to the body, was often recognized.

I saw one patient die within 18 hours of the onset of this disease and 12 hours after being put to bed. I have seen a number of others menaced with death during the first 48 hours of the disease. The statement that simple uncomplicated influenza cannot kill is, I believe, erroneous. It would be safe to say that death occurring within the first three days is due to influenza, and those occurring later are due to pneumonia, or some other complication. It would probably be proper to class those that die from the exhaustive gastro-enteritis as purely influenzal deaths, as this is due to the damage done to the gastro-enteritic mucous membrane at the time of the initial intoxication.

Cardiac dilatation was noticed more often in 1920 than in 1918, and was probably due to

4. Stine: An Early Sign in Influenza. Jour. Mo. State Med. Assn., May, 1919.

the fact that it was more carefully sought for. This condition can only be detected by a careful mapping out of the precordia, as there is usually no change in rate, rhythm or volume of the pulse to give warning.

One additional physical sign of influenza that I have noticed during the epidemic, is a characteristic appearance of the external auditory canal. On inspection the tympanum appears slightly pink with its outer rim a bright red, and from this streaks of scarlet run outward along the walls of the external canal.

I have been surprised how seldom the very characteristic smell of influenza has been mentioned. The patient's body and breath after the onset of high fever has a sweetish smell resembling streptococcus pus.

Abdominal pain with rigidity and tenderness was not uncommon among the pneumonias. Three cases where the pain and tenderness were in the region of the appendix, and the white count increased with the severity of the local signs, were operated upon and the appendix was removed. In all three the appendix was gangrenous.

SEQUELAE 1918

Empyema.—Only two cases, although numerous chests were punctured to clear up diagnostic difficulties.

Unresolved Pneumonia.—A great number of patients carried large consolidation in their lungs for several weeks after recovery, with seemingly no inconvenience.

Nephritis.—Found in about 0.8 per cent.

In the first part of our epidemic when we were using the smaller doses of camphor, albumin was present in 90 per cent. of all urines. In the last 500 cases when we used the larger doses, albumin was found in only 6 per cent. of all urines.

There was a marked degree of mental confusion and delirium in all the cases of post-pneumonic nephritis, but only two cases proved fatal.

Parotitis.—Two cases. One double parotitis with resolution; one with right sided parotitis with abscess formation.

Phlebitis.—Two cases of femoral vein.

Lung Abscess.—One case.

Melancholia and Depressive Psychosis.—A large number.

SEQUELAE 1920

Empyema.—None.

Unresolved Pneumonia.—The same tendency to the slow resolution of the consolidated areas were noticed.

Nephritis.—None.

Parotitis.—None.

Phlebitis.—One case of the femoral vein.

Lung Abscesses.—One case with single abscess in upper left lobe. One case of multiple abscess throughout right lung.

Peritonitis.—One case due to ruptured gangrenous appendix during course of pneumonia.

Mental Disturbances.—Two cases, both following very mild influenza without other complications.

Immunity.—During the epidemic of 1920 only three students were admitted with undoubted influenza that had had severe attacks during the epidemic of 1918.

A great many victims of the last epidemic were individuals, nurses, orderlies, doctors and others who seemed to have a natural immunity during 1918. This natural immunity seems to be lost if the individual becomes exhausted, exposed to cold, or acquires one of the coryzal infections.

Individuals that were in intimate contact with the infection during both epidemics suddenly developed severe influenza on the third or fourth day of a "bad cold."

Treatment.—In the treatment of disease, one tries to satisfy himself that his plan of therapy is directed along rational lines. To determine this he must be convinced of his knowledge of the abnormal physiological processes taking place in his patient.

There was one outstanding feature of the clinical picture of the newly admitted patient with influenza, and that was the overwhelming toxemia. Dependent upon this were two other features that I believe influenced the death, or recovery of the patient; first, the bleeding dependent upon the toxemia and, second, the vasomotor collapse, producing shock, which might end in an exhaustion of the vasomotor apparatus. Our understanding of toxic shock has been clarified by the work of the British Medical Research Committee.

The mechanism of shock in influenza may in a certain degree be dependent upon the destruction of blood elements, loss of blood due to capillary damage, and transudation of the plasma through the capillary walls under the influence of the bacterial toxin. The results of this are increased viscosity of the blood, the slowing of its circulation and poor oxygenation. Acidosis produced by the poor oxygenation and wasting of the tissues is finally encountered.

The problem in the treatment of influenza is the rapid elimination of the toxin and the prevention of vasomotor collapse. In my experience, the drug that ideally fulfills these requirements is camphor. This drug increases the production of sweat,⁵ acting upon the sweat centers as well as in the periphery. The out-

5. Luchsinger: Pflueger's Arch., 1876, Vol. 17; 1878, Vol. 16.

put of urine is also markedly increased. As a means of correcting vasomotor depression it is the drug par excellence.⁶ The experimental results of the stimulation of the vasomotor system is much more marked during pathological conditions of the circulation, than in the normal animal,⁷ and Pässler's experiments show that there is a marked improvement of the vasomotor tone in infected animals that is not so marked under other experimental conditions. Camphor seems to have no stimulating action on the normal heart, and but little in a heart damaged by toxemia.⁸

In a long series of animal experiments, Seibert observed an antiseptic action of camphor in the body upon certain forms of cocci, including the pneumococcus.⁹

During 1918 the following was the routine treatment: Rest in bed for all cases, as even the mildest was a potential pneumonia. The wards were kept warm and patients were protected from drafts. There was no attempt to control fever by hydrotherapeutic measures. On entrance the patient was given Dover's powder gr. 3 to 5 and quinine gr. 3 to 5. Medication by mouth was often discontinued on account of nausea. On the appearance of signs of consolidation, that is, areas of bronchial breathing or areas of bronchial breathing plus dullness, camphor dissolved in sterile olive oil was given intra-muscularly. Early in the epidemic the dosage was gr. 3 every 3 hours. This was increased until we gave patients entering with pneumonia, 72 grains of camphor at one dose, followed by 3 gr. every 3 hours. Comparing dosage with clinical record, we found that a dose of 36 gr. every 8 or 10 hours controlled the evidence of toxemia in a great majority of patients with the physical signs of pneumonia. Among one group of 214 cases (Army Hosp. No. 1 and Parker Hospital) of pneumonitis with consolidation, i. e., areas of bronchial breathing and dullness, treated with this dosage (36 gr. every 8 hr.) 35.5 per cent. had normal temperature within three days' time after camphor was started, 50 per cent. had normal temperature within six days' time; 10.6 per cent. recovered more slowly and 3.6 per cent. died from a progressive pneumonic consolidation.

In severe pneumonias, we did transfusions of citrated blood from a convalescent patient, using a modification of Robinson's method. Later the resident physicians were urged to do a transfusion on all patients showing evidence of profound toxemia.¹⁰

The results of this treatment were conflict-

ing. There was one recovery that seemed undoubtedly to be due to transfusion, but the fatal symptoms of most were unaffected. Normal horse serum was used with about the same success. The immunity immediately after recovery is slight, as a great number of relapses show, so the amount of actual immunizing substances conveyed in the amount of blood transfused from donor to recipient must be very small.

Separate wards were maintained for pneumonia, and influenza patients were never put in pneumonia wards, and all patients were surrounded by cubicles. To check against any possible mistake in admitting patients to bed, floor plans of our hospitals were made and placed at the nurse's desk on each floor. Beds were marked on these plans by colored pins: green representing beds occupied by influenza patients, red pneumonia patients, and white pins representing empty beds.

During 1920 the treatment that was found successful in 1918 was adhered to. We had discarded the use of convalescence blood (citrated method), but found that we were able to control our cases nicely with large doses of camphor dissolved in olive oil, given intramuscularly. This was started at first indication of severe toxemia, without waiting for the physical signs of consolidation. This seemed to remarkably diminish the toxemia of the onset. The output of urine was increased and albuminuria was almost absent. The sweating came early, and was profuse, the patients were quieter and much more comfortable, and cyanosis disappeared.

The dose was 36 gr. or over, given every eight hours. The odor of camphor was soon perceptible over the patient's body, also on his breath and in his sputum.

No untoward results of these large doses of camphor were noticed either in 1918 or in 1920. No evidence of cardiac stimulation, either as an increase in rate or strength of beat was noticed, but in the cases showing shock it did seem to rapidly improve the vasomotor tone and bring the arterial pressure back to normal.

Opium derivatives were given when restlessness or pain were an indication. Venisection was employed in fleshy individuals with persistent cyanosis and in pulmonary edema, or other evidence of a failing right side of the heart. Excellent results were usually obtained where this was done early. Adrenalin was used hypodermically where there was any indication of suprarenal insufficiency. A number of severe cases of pneumonia presented typical pictures of this condition including Sergeant's "white line" vasomotor skin reaction. Two seemingly fatal cases showed im-

6. Alexander: Lewin: Arch. f. Exp. Path. u. Pharm., 1890, Vol. 27.

7. Meyer and Gottlieb: Pharm. Clin. and Exp. P., 315.

8. Paessler: Deut. Arch. f. Klein. Med., 1899, Vol. 64.

9. Seibert: Muench. med. Woch., 1909, Vol. 36.

10. Stine: Treat. of Epidemic Pneumonitis at the Mo. State University, Jour. Mo. State Med. Assn.

mediate improvement upon the use of adrenalin.

Digitalis was freely used as a cardiac stimulant.

Sodium bicarbonate was used in those cases of long illness where there was an obvious wasting of tissue.

An adrenalin and cocain nasal spray was used to control the headache due to frontal sinus congestion or infection.

We still believe it is necessary to give the patient absolute rest and keep him surrounded by warm, well-ventilated air.

CONCLUSIONS—1918

We treated, during 1918, in our hospitals, 1,020 cases of pneumonitis. The average entering temperature of the patient was 102, and 33 per cent. showed signs of pneumonic consolidations. These patients were not cared for under ideal hospital conditions, yet our mortality was 1.3 per cent. of our total cases, or 3.4 per cent. of our cases showing evidence of pulmonary consolidations. We attribute this low mortality to our use of large doses of camphor, and the protection of our patients from any exertion, and from exposure to cold, realizing that every "influenza" was a potential "pneumonia."

Blood transfusion (which we commenced as early as October 10th) did not give definite results, at least no more than normal horse serum.

We believe that the terms influenza, and influenza complicated by pneumonia, are misleading, and that the whole disease process is a more or less extensive pneumonitis.

CONCLUSIONS—1920

Influenza can kill, due to its sudden and profound intoxication of the body. Its chief damage is to the walls of the capillaries, causing bleeding where they are poorly protected. This bleeding most often takes place in the pulmonary tissue, filling areas of lung with clotted blood and serum. Other bacteria may invade this clot, and after a period of incubation, those of sufficient pathogenicity can invade adjoining tissue and probably the blood stream. These conditions can leave chronic infective processes after the disease is over. This is a departure from our conclusions of 1918, and I consider the last of our 1918 conclusions a probable error. Then, due to the more severe type of influenza, the clinical picture appeared that of one continuous infective process; an incomplete bacterial investigation seemed to confirm this.

Now, 1920, we have a double picture: first that of a toxic phase, producing a hemorrhagic pneumonitis, and, secondly, a pneumonic phase where a more or less progressive consolidation

of the lung takes place in about 30 per cent. of our cases. Whether this is due to the primary invaders or secondary invaders has not been definitely settled to our satisfaction.

Camphor, in our experience, is the best drug with which to control the initial toxemia of the disease, and gives the best results in preventing and combating the secondary infections.

THE USE OF OXYGEN IN GYNECOLOGIC DIAGNOSIS*

H. E. HAPPEL, M.D.

ST. LOUIS

The determination of the cause of sterility in an individual case is one of the most difficult diagnostic undertakings. The possibilities to be considered are: first and foremost, absence of spermatozoa in the semen of the husband; second, defective development or faulty position of the female generative organs; third, occlusion of the fallopian tubes, either by an inflammatory condition of the tube itself, or as a part of a similar process involving the surrounding structures, as for example in appendicitis, or pressure by tumor. The importance of the first possibility cannot be overestimated and I do not believe that any operative measure to relieve sterility should be undertaken until it has been shown that the husband's semen contains numerous active spermatozoa. One of the patients whose case history follows underwent two major operations one of which was performed solely for the purpose of relieving sterility due, as has been proven, to azoospermia.

After a systematic examination has been made, one or more conditions may be found, such as a stenotic external os, an acute ante-flexion or retroversion of the uterus, which are possible etiologic factors but dilatation of the cervical canal with or without curettement of the uterine mucosa would be utterly useless if the fallopian tubes were occluded. To determine beyond a shadow of a doubt their patency, an exploratory laparotomy has been essential hitherto, but since the report of Rubin's¹ work on the injection of oxygen into the peritoneal cavity through the uterus and tubes it is no longer necessary to subject a patient to a major operation to gain this information.

Apparatus.—The apparatus is very simple, consisting of a tank of oxygen, a wash bottle two-thirds full of sterile water through which the gas bubbles, a manometer similar to that used for the determination of blood pressure, and a cannula, all connected by rubber tubing. The cannula is the long tip of a Keyes-Ultzman syringe (used for deep urethral instilla-

*Read before the Linn County Medical Society, Brookfield, Mo., November 11, 1920, and the Association of Surgeons of St. Louis, December 22, 1920.

tions) bent slightly to conform to the direction of the cervical canal and fitted with the rubber cone removed from a urethral syringe placed at a distance of one and a half inches from the distal end. This acts as an obturator in the external os, preventing the escape of gas along the tube.

Technic.—The patient is given a vaginal douche and placed in the lithotomy position. A bivalve speculum is inserted, the vagina swabbed out with alcohol, the anterior lip of the cervix grasped with a pair of tenaculum forceps, and the cannula inserted into the cervical canal. No difficulty is encountered if gentle traction is made at the same time on the forceps, and but little pain is caused. The oxygen is turned on gradually, its rapidity of flow being indicated by the bubbles in the wash bottle. The needle of the manometer rises steadily to sixty or seventy millimeters of mercury, when, if the tubes are patulous, it drops abruptly to about forty or fifty and remains around that point. At times more pressure is required in patent cases but one hundred and forty is the maximum encountered in our series of cases and it was probably due to defective technic. In the non-patent cases the pressure rises to about two hundred when the gas begins to escape from the external os along the cannula.

The flow of the gas causes a slight cramping pain in the pelvic region but in none of our cases was it of sufficient severity to compel us to interrupt it. The presence of oxygen in the peritoneal cavity is proof positive of the patency of the tubes and a very small quantity can be seen with the fluoroscope between the intestines and the anterior abdominal wall or just beneath the diaphragm where it may be readily identified by having the patient take a deep inspiration.

Rubin has determined that one hundred and fifty cubic centimeters of oxygen is the smallest quantity that can be visualized and that it causes none of the untoward effects of the

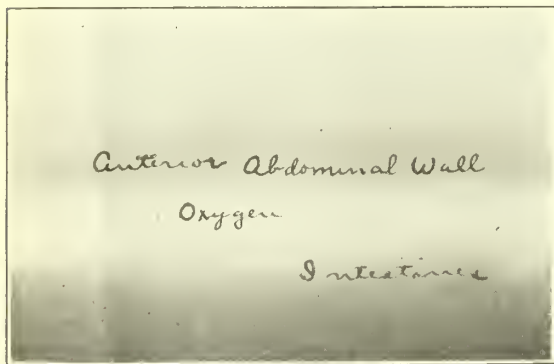


Fig. 1.—Lateral view, patient in dorsal position, showing space between intestines and anterior abdominal wall filled with oxygen.



Fig. 2.—Exposure made with speculum A and cannula B in situ and gas flowing. C, shadow cast by gas in uterine cavity and left tube, which is occluded at outer extremity.

larger quantity, such as pain in the back and shoulders, sense of fullness in the epigastrium on assuming the erect position and dyspnea on exertion. Since from two to five days are required for the absorption of the gas and consequent relief of the unpleasant symptoms, the advantages of the small quantity are obvious, as it in no way interferes with the daily duties of the patient and the mere presence of oxygen in the peritoneal cavity absolutely proves that at least one tube is open. However, if it is desired, a liter or more of oxygen may be introduced and the fluoroscopic and plate examinations made of the various organs as in an ordinary pneumoperitoneum case where the gas is introduced through a needle in the abdominal wall.

In the non-patent cases we have practiced placing the patient in the Trendelenberg position with the cannula in the cervical canal and the gas running, to determine, if possible, the location of the obstruction and the condition of the tubes. We believe that much valuable information can be gained in this manner as is indicated in Case 3.

The pressure readings are very suggestive, but are not sufficient evidence on which to base an opinion as to patency without confirmation by the fluoroscope. Where the pressure rises to two hundred on repeated trials, the tubes are probably occluded and vice versa where its maximum is not over one hundred, the tubes are probably patent. The long cannula may become partially occluded causing an abnormal rise in pressure.

Sequelae.—After the examination, there is a slight bloody discharge due to traumatism of the mucous membrane of the cervical canal by the cannula but no pelvic pain, nor have we seen any signs of old infections being

lighted up. Several of our cases were operated upon on the day following the examination and in none of them could we detect any evidence of injury to the uterus or tubes. The objection has been made that there is danger of introducing infective material from the uterus into normal tubes or from the tubes into the peritoneal cavity. This is purely theoretical. Practically, the uterine cavity is very rarely infected and a purulent discharge always indicates such a condition, in which case the method is absolutely contraindicated. It has been determined by experiment on specimens removed at operation that many times the pressure advised is required to force open or rupture occluded tubes, thus answering the second objection.

Contraindications.—By no means should oxygen injection be employed in the presence of an acute inflammatory condition within the peritoneal cavity or in a purulent condition of the cervix or urethra.

Indications.—(1) In all cases of sterility, where the husband is not at fault, before resorting to treatment or operation. (2) As a means of following up cases in which salpingostomy has been done. (3) Where the tubes have been resected or ligated to produce sterility. Under no circumstances should any operative measures be undertaken to relieve sterility until the patency of the tubes has been determined.

Conclusions.—This method offers a safe and painless means of obtaining information which has hitherto been gained by laparotomy, a major surgical operation. It furnishes aid in diagnosis and prognosis and should save women from numberless useless operations, such as dilatation and curettement, plastic operations on the cervix or shortening the round ligaments in cases where the tubes are hopelessly obstructed.

I wish to express my appreciation to Drs. Jos. C. Peden, roentgenologist, and O. P. J. Falk, for their advice and assistance in carrying out this work.

CASE 1. M. H., age 23, married three years, never pregnant; history suggestive of salpingo-oophoritis shortly after marriage. Examination revealed a stenotic external os, uterus acutely anteverted and anteflexed, normal in size. The right ovary was palpable and there was a slightly tender mass in the left fornix.

Oxygen Inflation.—The pressure rose to two hundred and twenty millimeters of mercury at which point the gas was allowed to escape along the side of the cannula. Fluoroscopic examination showed no gas in the peritoneal cavity. Repetition gave the same result. Diagnosis: bilateral occlusion of fallopian tubes.

CASE 2. M. N., age 45, married 22 years, has had five children. Examination showed a bilateral laceration of the cervix with erosion and a retroverted, movable uterus which was somewhat enlarged and

deviated to the right of the midline. No adnexal masses were felt.

Oxygen Inflation.—This was performed without difficulty. The pressure rose to one hundred and twenty and then fell to seventy and remained about this point. After two minutes' flow, fluoroscopic examination revealed the presence of gas in the abdominal cavity. Operation was performed the following day, a supravaginal hysterectomy for a submucous fibroid. The tubes were perfectly normal, the pelvis free from adhesions and fluid.

CASE 3. P. B., age 32, married six years, three miscarriages previous to an operation four years ago, at which time, she stated, the right tube and ovary were removed and the cystic portion of the left resected. Examination revealed a cervix and uterus normal as to size, position and mobility. No adnexa were palpable in either fornix.

Oxygen Inflation.—In two attempts the pressure rose to two hundred and twenty when it began to escape along the cannula. The fluoroscope detected no gas in the peritoneal cavity. The patient was placed in the Trendelenberg position with the cannula in situ and the gas flowing slowly. A plate was made which showed the uterine cavity and the left tube distended to what appeared to be its fimbriated extremity. This suggested that the occlusion was due to adhesions at the distal end and that the tube itself was not diseased, which makes it a very favorable case for salpingostomy.

CASE 4. A. W., age 52, married twenty-nine years, three children. On examination it was found that she had a second degree laceration of the perineum, with a large cystocele, a moderate rectocele, a small bilateral laceration of the cervix, a uterus slightly enlarged to the right, freely movable and in the anteverted position, with no palpably enlarged tubes or ovaries.

Oxygen Inflation.—The manometer indicator rose to sixty and abruptly dropped to forty where it remained. At the end of one and one-half minutes oxygen was visualized beneath the diaphragm with the fluoroscope. Laparotomy the next day disclosed an intraligamentary fibroid on the right side and normal tubes and ovaries.

CASE 5. S. S., age 28, married six years, never pregnant. Six and a half years ago she had an appendectomy. One year and a half later she was operated upon for the relief of her sterility at which time a few adhesions were liberated, the cystic portion of an ovary resected and the round ligaments shortened.

Examination.—Cervix normal in size and consistency, os not stenotic, uterus well developed, anteverted, anteflexed and movable. No masses were palpable.

Oxygen Inflation.—The cannula was inserted without difficulty. The pressure rose to seventy and dropped to fifty. Oxygen was seen in the peritoneal cavity after one minute and forty-five seconds' flow. Examination of the husband's semen had been made previously. In one specimen obtained by massage of the vesicles and in two condom specimens, not a single spermatozoon was seen.

CASE 6. A. S., age 34, married four years, one child. She had a right-sided laceration of the cervix with considerable erosion and tenderness but no definite mass in the right fornix.

Oxygen Inflation.—The pressure rose to one hundred and sixty and fell slightly. Examination of the cannula showed that it was partially occluded. It was cleansed, inserted again and the pressure rose to seventy, abruptly fell to fifty and remained there. After two minutes oxygen was seen in the peritoneal cavity.

The following day a curettement and trachelorrhaphy were done. The right ovary was found to be

enlarged on palpation under ether but the abdomen was not opened. Her convalescence was uneventful.

CASE 7. L. K., age 29, married twelve years, one child eleven years old, no miscarriages. Examination showed a bilateral laceration of the cervix with severe erosion. The uterus was anteverted and ante-flexed, normal in size and mobility.

Oxygen Inflation.—The pressure rose to fifty and remained about that height. After two minutes, oxygen was demonstrated in the peritoneum. Her sterility is probably due to the endocervicitis.

Wall Building.

REFERENCES

1. Rubin, I. C.: The Non-Operative Determination of the Patency of the Fallopian Tubes in Sterility. *Jour. A. M. A.*, April 10, 1920, p. 1017, and September 4, 1920, p. 661.

THE ULTRAVIOLET RAY IN THE TREATMENT OF CUTANEOUS DISEASES*

RAY C. LOUNSBERRY, M.D.

SPRINGFIELD, MO.

For thousands of years people have enjoyed the beneficial effect of sunlight in the treatment of skin diseases. Rollier and Bernhard have had splendid results with natural sunlight at high altitudes. They record the healing of many skin lesions by this method, and today the value of the sun bath is universally recognized by the profession. Nevertheless, we must appreciate this fact, that the sun's rays are not all beneficial in the treatment of skin diseases. The red rays are especially harmful; thus it remained for some scientist interested in heliotherapy to bottle up the sun's rays and to filter out the harmful rays. This was done by means of a quartz lens and a running water filter.

Dr. Finsen, the great master of heliotherapy, after years of research and study with natural sunlight, found in the carbon mercury arc a light rich in blue, violet and ultraviolet rays. He was also first in devising means for removing the harmful heat rays from the light, thus making it possible to place pressure upon the tissue for the purpose of deep penetration without injury to the tissue.

Later a scientist by the name of Kromeyer discovered that an electric current passing through mercury vapor in a vacuum produced a most intense light, rich in violet blue and ultraviolet rays, that is, if that light were transmitted through a quartz lens. Quartz is almost completely transparent to the ultraviolet rays, and since it can be heated to a very high temperature without risk of injury to the lamp, manufacturers were able to construct lamps of great power.

Epoch-making results are being secured by

the use of this light in the treatment of skin diseases, and it is hoped that quartz light heliotherapy will take a permanent place in the treatment of cutaneous diseases in the future.

Records show that the lamp is effective in the treatment of acne, alopecia areata, eczema, folliculitis, furunculosis, carbunculosis, granulating wounds, gangrene, lichen, lupus, mycoses, nevi, telangiectasis, dermatitis, seborrhea, scrofuloderma, vitiligo and superficial malignant conditions. Practically every skin clinic, and cutaneous disease specialist has an ultraviolet ray machine, and reports show remarkable results from its use. Up to the present time I have treated ten cases of acne vulgaris, seven cases of eczema, five cases of psoriasis, three cases of dermatitis venerea, three cases of furunculosis, ten cases of carbunculosis, three cases of phagadema, two cases of lupus, two cases of vitiligo, two cases of chloasma, three cases of alopecia areata, one case of lichen planus, one case of purpura hemorrhagica and three cases of epithelioma of the skin with favorable results. My success has been gratifying indeed. In fact, I have found it especially useful in cases like impetigo, dermatitis venenata and in acute skin affections. The healing of ducrey ulcers have been aided, and beneficial results in erysipelas have been demonstrated in my office with the Kromeyer Lamp. Chronic G. C. of the cervix has responded to heliotherapy.

We must not however discredit the intrinsic value of internal treatment, both medicinal and dietary, because without logical internal treatment our external treatment would be much impaired. We must also support our ultraviolet ray treatment with lotions, ointments, pastes and plasters.

I have found the following general conditions to exist in my experience with the Kromeyer Lamp: First, that brunettes will stand a longer treatment than blondes. Secondly, that a person who tans readily when exposed to the sun can stand more light than one who does not. Thirdly, that a diseased area can stand more light than a non-diseased area. Fourthly, that a thick, oily skin will take more than a thin dry skin; also the soles of the feet and the palms of the hands more than other surfaces. Adjacent surfaces stand little light, while exposed areas stand a much longer radiation. Another finding which has been proved is the great need of giving the second treatment before the effects of the first treatment has worn off, thus producing the desired cumulative effect. Lastly, the younger the patient the better the prognosis.

The ultraviolet lamp as designed by Kromeyer produces a bactericidal effect upon the pyogenic organisms. It acts as a decongestion agent, causing a rapid resorption of pathologi-

*Read before the Southwest Missouri Medical Society, November 18, 1920.

cal exudates. It relieves the internal organism of blood by drawing the blood to the surface, thus a recharging of the blood with light energy takes place, which enables the blood ingredients to convey an increased quantity of oxygen to the cells, and an increased amount of toxins away from the cells. The rays accelerate the granulating and healing of sluggish wounds, and exert a most soothing effect upon the central nervous system.

Following is the report of three cases:

CASE 1. Female, age 13. Diagnosis, telangiectasis. Location: covered surfaces of the body. Variety: semi-deep. History: Acute infectious disease at the age of five. Physical examination, negative. Laboratory examination, negative.

A girl thirteen years of age, slightly under weight, with an anemic face and with an abnormal mentality for one so young, entered my office following the suggestion of a friend. She complained of a disfiguring condition of the skin which was a complication following an infectious disease occurring ten years before. She had been treated by numerous physicians all of whom declared her affection unfavorable to treatment. This telangiectatic condition extended over all the covered surfaces of her body, including her arms and neck. My object in treatment, therefore, was to produce a cosmetic result. I am attempting to remove the discolored area so that she will be enabled to wear a low-necked dress and short sleeves. I gave her twenty-minute exposures, with the compression method, while the quartz lens rested firmly on the skin, at two week intervals. The result produced over the radiated area has come far above my expectations. The skin in these areas is practically normal.

CASE 2. Female, age 65. Diagnosis, epithelioma superficialis. Location, right side of nose. Variety, superficial. History negative. Physical examinations negative. Laboratory examination negative.

An old woman of sixty-five years of age, upon recommendation of a colleague came to me for ultra-violet ray radiation. She complained of an epitheliomatous-like ulcer on the side of her nose, of long standing, about the size of a twenty-five cent piece. She had previously received one hundred and thirty X-ray treatments, with more or less good results. Her former physician stated that many times the ulcer would practically clear up and then to his dismay would break out again. She had all the symptoms of superficial type of cancer with no accompanying glandular involvement. The condition followed in the wake of a slight injury, confirming the latent embryonic rest theory, though it is apparent that the cause of cutaneous cancer is not definitely known. I prescribed internal remedies with no apparent result. I considered excision, but the location contraindicated that procedure. The X-ray has been tried with unfavorable results. Local applications failed. I followed the Finsen method, giving her, at three-day intervals, exposures of fifty minutes in length at a distance two and one-half inches with favorable results. At the present time new granulation is forming, and the area has been eradicated.

CASE 3. Male, age 28. Diagnosis, lupus erythematosus. Location, nose and cheeks. Variety, superficial. Duration one year. Physical examination negative. History negative. Laboratory examination negative.

Patient entered my office complaining of an eruption on his face of long duration. Upon close examination the cardinal signs of lupus were demon-

strated. The sharply defined circumscribed area of reddish hue blending into violet, located where this condition was found, associated with the desquamation of adherent scales is pathognomonic of lupus. The history of this case was very interesting because it followed in the wake of an epithelioma of the nose which had cleared, but had left scar tissue instead of normal tissue after the final treatment.

In a logical treatment of this condition we must first consider the cause. If the cause be due to an erythema, seborrhea, dermatitis, acne, or any other local or general skin affection, that associated disease must be cleared up. The influence of a systemic condition or a lowered resistance, or a mental or gastro-intestinal disturbance, especially when associated with an irritating local condition, is marked.

The treatment in this case was both constitutional and local, depending upon the aggravating cause. Concluding that the cause was due to both conditions I proceeded to treat accordingly. I prescribed a diet, a tonic, exercise, and local applicants, while at the same time I introduced heliotherapy. The first radiation produced good results. Ten radiations one to five minutes in length at a distance of two and one-half inches with the concentrated ray have been given with remarkable results. Two areas which were the size of a dollar have disappeared from his cheeks, leaving the skin normal. The area on his nose has been reduced greatly. It is more resistant to treatment, because it is located on tissues which had been made functionless by radium.

CONCLUSION

In conclusion I wish to state that the skin specialist has in the Kromeyer Lamp a valuable asset in the treatment of skin diseases. Its proven worth combined with its simple method of application makes it invaluable in the hands of the operator.

607 Woodruff Bldg.

A CASE OF THORACOPAGUS DELIVERED BY CESAREAN SECTION

E. H. BOUNDS, M.D. and A. L. SHANKS, M.D.

HANNIBAL, MO.

The father of this monstrosity is 26 years of age, 6 feet 1 inch, weight 170, normal in every way. No specific history. The mother is 23, in perfect health, well developed, no previous illness. No specific history. Father and mother living, in good health. Brother living, age 27, good health. She began menstruating at age of 12. Her last menstruation was April 10, 1920. She first felt life in the latter part of August. Gestation period proceeded normally. January 19, 1921, the amniotic sac ruptured while she was about her household duties. January 20 had slight pains during the night. January 21 rested well during the day with slight pain at night. No dilatation. January 22 the pains became more pronounced during the forenoon. At 4 p. m. the pains harder and regular. At 9 p. m. dilatation was the size of silver dollar and pains about

every seven minutes. At midnight dilatation was complete and pains every three minutes; presenting head high up, occiput anterior position.

At 1 a. m. the 23rd, no further progress

to the perineum where no further progress could be made. It was then realized that we were dealing with some abnormality. The head was pushed back and a hand inserted into the uterus and a diagnosis made of two



Fig. 1.



Fig. 2.

had been made but pains were hard and regular. It was then decided to do an instrumental delivery. After considerable difficulty the forceps were applied and head brought down

heads attached to one body, after which we decided that a vaginal delivery was impossible. At 3 a. m. the patient was removed from her home to St. Elizabeth's Hospital and prepara-

tions made for Cesarean section. Under ether anesthesia administered by Dr. C. T. Shepherd a mid-line incision was made and the uterus lifted out. The abdominal cavity was protected by towels and gauze packs and the uterus opened from bladder fold of peritoneum to the fundus and the fetus delivered. The single placenta was next loosened and removed and the uterus closed with three rows of catgut. The packs, towels and blood clots were removed and 24 ounces of normal saline solution poured into the abdominal cavity. The peritoneum and fascia were closed with catgut and skin with metal clamps.

During the operation the patient's condition became alarming from loss of blood and she was stimulated with camphorated oil hypodermically and normal saline in the median basilic vein. After operation she received ergot, 1 c.c. every four hours, pituitrin obstetrical, 1 c.c. every four hours hypodermically, and coffee and whiskey per rectum. In the 24 hours following operation the stomach and intestines became enormously distended with gas which was finally relieved by alum enemata and turpentine 5 drops in capsule given twice daily for four days. During this distention she was disturbed by hiccoughs. On the 24th her temperature was 100.2, pulse 120. On the 25th, temperature came down to 99, pulse 108, and remained so until noon the 26th when temperature rose to 101.4, pulse 120. The flow became foul smelling and she had a chill, followed by profuse sweat. The morning of the 27th we gave 5 m. mixed stock vaccine strep. staph. and colon, increasing 5 m. every 24 hours till the 31st when she had an eruption like hives and we stopped the vaccine. The temperature came down to 98.6, on February 5th and remained down till the 9th, when it rose to 103, pulse 128 with pain and swelling in left inguinal glands and leg. Since this time she has been running a septic course with sweats. Her tongue has remained clean and appetite good until February 11 when she complained of no appetite. February 11 she was given m. v. of mixed serum, increasing m. v. every 24 hours until the 16th when improvement began, temperature came to normal February 18, and the prognosis now looks favorable.

The fetus delivered shows two perfectly formed heads, necks and shoulders with the thoracic portion of the bodies fused into one down to the umbilicus. From the umbilicus downward the pelvis, hips and legs of both were normal. Both were females. In the back where the fusion of the shoulders took place was the right arm of one child with finger nails one-fourth inch long. This arm extended around the opposite child as if in embrace. The roentgen-ray showed two distinct spinal

columns. No postmortem examination of the viscera was allowed so no description can be given of liver and heart. The monstrosity weighed twelve and one-half pounds.

FUNDAMENTAL CLASSIFICATION OF DISEASE BY THE BASAL METABOLIC RATE.—Walter M. Boothby, Rochester, Minn. (*Journal A. M. A.*, Jan. 8, 1921), states that the basal metabolic rate is a measurement of the heat production in a person under standard conditions. Like the temperature, the metabolic rate is a measurement of certain heat phenomena inherent in the living organism. The basal metabolic rate differentiates diseases into three fundamentally distinct groups those with normal basal metabolic rates (a normal heat production); those with increased basal metabolic rates, and those with decreased basal metabolic rates. The "normal" standard of the basal metabolic rate is not exact, yet the comparatively small "normal" variations, compared to the wide range of pathologic variation, admit of fully as accurate grouping of diseases as does the body temperature.

PROPHYLACTIC INOCULATION AGAINST YELLOW FEVER.—From the results of vaccination in guinea pigs, Hideyo Noguchi, New York, and Wenceslao Pareja, Guayaquil, Ecuador (*Journal A. M. A.*, Jan. 8, 1921), conclude that when sufficient quantities of the killed culture of *Leptospira icteroides* are given to guinea pigs, these animals are usually rendered resistant to a subsequent leptospira infection. The degree of protection, however, is not strictly proportional to the amounts of the vaccine inoculated. As regards the vaccination of human beings, thus far the results are distinctly encouraging, but many more observations will be needed before a final decision of its value can be arrived at.

ANTHRAX IN ANIMAL HAIR.—In New York City in the last seventeen months there have been reported to the division of industrial hygiene of the department of health thirty-four cases of human anthrax, of which eleven have been fatal. A campaign of education of those engaged in the manufacture of brushes, particularly those using horse-hair, was undertaken in order to secure general co-operation in an endeavor to annihilate this modern industrial and public health menace at its source. The details of this campaign are given by S. Dana Hubbard, New York (*Journal A. M. A.*, Dec. 18, 1920).

BASAL METABOLISM DETERMINATIONS.—The results obtained in this series of cases show the suitable clinical accuracy of either of the two portable closed-circuit respiration apparatus used by Henry N. Tihen, Chicago (*Journal A. M. A.*, Jan. 8, 1921). The Jones apparatus, the most recent addition to the methods now in use for determining basal metabolism, because of its compactness, relative simplicity and accuracy, is especially valuable for clinical use.

EXARTICULATION OF HIP JOINT.—One case is cited by Barney Brooks, St. Louis (*Journal A. M. A.*, Jan. 8, 1921), in which preliminary ligation of the common iliac artery was performed before the hip joint exarticulation was undertaken. There was little loss of blood. The patient's general condition was not disturbed by the operation and the anemia of the tissue was not severe enough to influence the kindly healing of the operation wound.

THE JOURNAL

OF THE

Missouri State Medical Association

APRIL, 1921.

EDITORIALS

DATES OF ANNUAL MEETING CHANGED

Dates for the Annual Meeting at St. Joseph have been changed from May 17, 18, 19 to May 24, 25, 26 on account of conflict with another convention.

THE FIFTY-FIRST SESSION OF THE LEGISLATURE

It is common knowledge among our members that the recent session of the legislature passed three bills affecting the practice of medicine and the hospitalization of the sick which are so reactionary that if they are signed by the governor the state will be opened to the graduates of every low-grade medical college in the country, disorganize the management of every hospital in the state, and give Chiropractors the right to practice medicine according to their peculiar conception of disease processes. A vigorous campaign against these bills culminated in a hearing before Governor Hyde at which leading citizens from St. Louis, Kansas City and other towns informed the governor that the operation of these laws would have disastrous effects upon the public.

The bill removing the word "reputable" from the medical practice act as it affects medical colleges will undoubtedly open the state to an influx of graduates from low-grade medical schools that the board of health will be compelled to examine for license to practice. Since the law requires that these examinations shall be "elementary in character" many of the applicants will pass the grade. Thus Missouri would turn her back upon the light of scientific achievements of today and step backward into the darkness surrounding medical education of thirty years ago when incompetents and untrained persons were turned loose upon the people to treat diseases about which they knew little or nothing. The safeguards erected by the terms of the present statute are frail enough, but with a conscientious and upstanding board of health such as we have at present to administer the law the fraud and fakery of former years have been greatly reduced. The removal of these safeguards as contemplated in S. B. 433 will strip the board of health of its power to discover and defeat

dishonest practices and fill the courts with suits against the board and its members.

The hospital bill is seemingly an innocent attempt to give persons under hospital care the right to be treated by the physician or "practitioner" of his choice—"the old family doctor," said one of the advocates of the measure, "who has learned by experience" how to care for his patients. In reality, however, it would thrust upon the management of a hospital all sorts of doctors and near doctors, their only qualification being that they are "recognized by the state." It requires no stretch of the imagination to picture the disorganization that would follow such unbridled hospital service.

All these measures are retrogressive and destructive of progress for they seriously interfere with forward movements in protecting the health of the people. By their operation much of the ground won by prodigious effort in caring for the sick and preventing disease would be surrendered.

These things were made plain to the governor at the conference he granted to the Association, the medical schools and the hospitals on March 29. For three hours he listened to those who spoke against the bills and heard those who favored the measures. At this writing the governor has not indicated what action he will take. Those who were in the party appearing against the bills are mentioned in another column in this issue and a transcript of the proceedings will be published next month.

Among the measures which passed the legislature and were favored by our Association are the bills introduced by the Children's Code Commission, a list appearing in another column, the bill consolidating the boards of the eleemosynary institutions and providing for a full time director in charge of all such hospitals, and the bill reducing the time in which suits for malpractice may be brought against physicians, dentists, hospitals and roentgenologists from five years to two years. The governor has signed the last named bill and it will become a law in ninety days.

SIXTY-FOURTH ANNUAL MEETING

The annual meeting at St. Joseph will occur on Tuesday, Wednesday and Thursday, May 24, 25 and 26. An interesting program is being arranged by the Committee on Scientific Work, and the members in St. Joseph are looking forward to the opportunity of acting as hosts to the Association and are preparing to make the visit a pleasant and profitable occasion for every member. St. Joseph always attracts a large number of members when the annual meeting is held in that city, so we may

expect the registration to exceed the number that has attended the annual meetings in recent years. The Robidoux Hotel will be headquarters. The rates for this hotel and the other hotels will be published in the May journal. In this number we publish the preliminary program and will publish the complete program in the May journal. We hope a large number of members will arrange their work so that they can attend this meeting.

HEALTH SERVICE BUREAU

The St. Louis Chapter of the American Red Cross has established a Health Service Bureau as a permanent activity in St. Louis. The bureau is located at 805 Equitable Building, Sixth and Locust Streets. Its purpose is to act as a clearing house for health information.

The various activities it plans to carry out are as follows:

1. By the collection of information pertaining to health work in the city, through which any interested person or organization should be able to secure up-to-date information in regard to all phases of public health in St. Louis, not including personal medical advice.

2. Through the collection of pamphlets, journals, etc., pertaining to health, it is the purpose of the bureau to afford assistance to persons seeking technical or non-technical health information. Already over 800 magazines, pamphlets, etc., have been catalogued and filed for public use.

3. Through its publicity section the bureau is attempting to give to the public information on matters pertaining to health in a popular way, through publication, through exhibits, distribution of literature, etc.

4. By means of a speakers' bureau it will provide public health speakers to organizations and clubs desiring such service.

5. One of the most important activities will be a research bureau which will function at the request of existing organizations for the purpose of securing information regarding local health conditions.

6. The bureau plans to study health needs from the point of view of education and to meet such needs as are not being met by existing organizations, in various ways making health information as attractive and accessible as possible.

In brief, the Health Service Bureau has been organized as one of the fields of work for the public health department of the local chapter of the Red Cross. In the past it has been necessary for any individual or organization desiring to obtain information regarding what is being done in a health way in St. Louis to make a personal investigation. All this in-

formation will be kept on file at the Red Cross bureau. The bureau should be of the greatest service to physicians in the community, as it has been developed primarily for their use. The bureau will be under the direction of Dr. Borden Veeder.

NEWS NOTES

DR. HARRY M. MOORE of St. Louis has been appointed chief surgeon of the police department.

DR. W. H. ABERNATHY of Menfro has been very seriously ill with pneumonia for several weeks.

THE third annual meeting of the Western Electrotherapeutic Association will be held at the Little Theatre, Kansas City, April 21-23. The annual dinner will be given at the City Club on Thursday evening, and a number of distinguished speakers will be present.

ONE of our members who is compelled to retire from practice on account of poor health desires to dispose of his practice. The location is situated in a town of seven hundred in the north central part of the state in a good farming community with good railroad service. Any member interested may obtain the address from the Secretary of the Association, 3529 Pine St., St. Louis.

DURING February the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Armour & Co.: Corpus Luteum Tablets, 5 grains.

David B. Levy: DuBois Iodoleine, Injectable, Ampoules, 2 c.c.

E. R. Squibb & Sons: Fat-Free Tincture Digitalis.

THE death of Dr. August Meisch of Manchester, Mo., leaves that community without a physician. The town is in St. Louis County, close to St. Louis. It offers a good opportunity for a competent physician; a married man is preferred. Mrs. Meisch will offer good terms for the office equipment. Roads are good and the farming community very desirable. Any physician who is interested should address Mrs. August Meisch, Manchester, Mo., St. Louis County.

DR. JACOB JACOBSON of St. Louis was dangerously wounded on March 28, when he resisted the attack of two robbers who demanded a diamond ring he was wearing valued at \$2,500. Dr. Jacobson resisted the attack and was shot three times, two bullets passing through his chest. The third bullet caused a flesh wound on his head but was deflected

and wounded the second robber in the neck. While the wounds sustained by Dr. Jacobson are serious he is making a good recovery.

BELIEVING that the welfare of a community can best be looked after and promoted by co-operation, the Audrain County Chamber of Commerce invited the members of the Audrain County Medical Society to a luncheon at the Hotel Hoxsey in Mexico, March 17 to find out what the doctors needed and most desired along public health lines. Dr. J. G. Moore spoke on the needs of a county hospital and Dr. Robt. W. Berrey spoke of the needs of better equipped playgrounds at the schools and on the examination of school children.

THE Canadian National Railways-Grand Trunk Railway System, expect to handle a large number of members attending the American Medical Association at Boston, June 6-10, using the H. and S. Tours of Chicago. The party will leave Chicago on the Grand Trunk System, train number 14, Thursday afternoon, June 2, visiting Niagara Falls, Toronto, Montreal, Quebec and St. Anne de Beaupre, and arriving at Boston, Monday, June 6th. The return trip to be made from Boston via New York. This will be an all-expense tour but the amount as yet has not been decided upon. Members who may be interested in going to Boston with this party should communicate with Mr. W. E. Rudolph, Traveling Passenger Agent, 305 Merchants-Laclede Bldg., St. Louis. The railway company is anxious to know as soon as possible how many persons will make the trip with this party so they can announce the cost of the trip.

EMINENT tuberculosis specialists who at the request of Surgeon-General Cumming, of the U. S. Public Health Service, have been visiting the tuberculosis hospitals of the Service "to see that every one of the 20,000 tuberculosis ex-service patients shall have the best treatment to be had in any hospital in the land" have completed their task and have submitted their suggestions.

Steps to put into effect their suggestions were immediately taken, and are already in operation in part. The new developments will entail some additional expense and additional employment of personnel, especially high-grade personnel. The specialists, Doctors David Lyman, of Wallingford, Conn.; Victor Cullen, of the Maryland State Sanitarium; Martin E. Sloan, of Towson, Md.; Georme Thomas Palmer, Springfield, O., and Henry Hoagland, of La Jolla, California, represent the highest ideals in the tuberculosis

sanatorium management and their suggestions when carried into effect will provide the very best type sanatoria.

At the conference with Governor Hyde on March 29th to protest against signing the medical college bill, the hospital bill, and the Chiropractor bill, Dr. H. W. Loeb, Dean of the St. Louis University and Medical School, acted as chairman of the delegation and introduced the speakers, as follows:

Dr. George Dock, Professor of Medicine, Washington University Medical School; Father Robison, President St. Louis University; Louis P. Aloe, President St. Louis Board of Aldermen; Judge Stevens, Chicago, American College of Surgeons; Mr. W. K. Cloud, Chamber of Commerce of Kansas City; J. Lionberger Davis, Barnard Free Skin and Cancer Hospital, St. Louis; Bishop Partridge, St. Luke's Hospital, Kansas City; Dr. Herman E. Pearse, Kansas City, Missouri State Medical Association; Dr. C. R. Woodson, Buchanan County Medical Society, St. Joseph. The following were in the party:

B. A. Wilkes, Missouri Baptist Sanatorium, St. Louis; Dr. E. P. North, President St. Louis Medical Society; Frank Rand, President Roberts, Johnson, Rand Shoe Company; Dr. E. W. Saunders, Bethesda Hospital; E. C. Simmons, President Simmons Hardware Company; David Somers, St. Louis; Horace W. Swope, St. Louis; Dr. Ralph Thompson, Professor of Pathology St. Louis University Medical School; Dr. Borden Veeder, Professor of Children's Diseases, Washington University Medical School; Aaron Waldheim, St. Louis; Wm. A. Horshall, St. Louis; Dr. Wm. H. Vogt, St. Louis; Mr. Van Schoiak, St. Louis Chamber of Commerce; Frank V. Hammar, St. Louis; Mr. McNally, National Bank of Commerce; Edw. Mallinckrodt, Jr., St. Louis; Dr. W. L. Clapper, St. Louis; Judge Stevens, Chicago, American College of Surgeons; Dr. W. J. Ferguson, Sedalia, President Missouri State Medical Association; Dr. A. R. McComas, Sturgeon; Dr. Nathaniel Allison, Dean Washington University Medical School; Dr. M. A. Bliss, National Committee on Mental Hygiene; Joseph Bray, Municipal Nurses' Board; Dr. H. G. Bristow, Professor Chemistry, St. Louis University Medical Department; Dr. L. H. Burlingham, Superintendent Barnes and St. Louis Children's Hospitals; J. Lionberger Davis, Barnard Skin and Cancer Hospital; Dr. Geo. Dock, Professor of Medicine, Washington University Medical School; Paul Dolvin, McQuade-Norris Piston Ring Company; Dr. E. J. Goodwin, Secretary Missouri State Medical Association; Dr. A. H. Hamel, Chairman Committee on Public Health,

St. Louis Medical Society; Judge Geo. C. Hitchcock, St. Louis; Dr. E. Horace Johnson, St. Louis; Dr. Don Joseph, Vice-Dean St. Louis University Medical School; Major M. W. Kerr, Medical Corps U. S. Army; Dr. Hannau W. Loeb, Dean St. Louis University Medical School; Dr. W. H. Luedde, St. Louis; Rev. W. F. Robison, President St. Louis University; Louis P. Aloe, President St. Louis Board of Aldermen; Dr. G. L. Noyes, Columbia; Dr. M. P. Overholser, Harrisonville; Dr. A. W. McAlester, Columbia; Dr. Guy Titsworth, Sedalia; Dr. C. R. Woodson, St. Joseph; Dr. J. I. Byrne, St. Joseph; Drs. Herman E. Pearse, Howard Hill, R. M. Schaufler, W. L. Gist, J. D. Griffith, Mr. W. K. Cloud, and others from Kansas City and other towns.

PRELIMINARY plans for a child health demonstration, unique in character and scope and promising to prove of first importance in the general movement for conservation of child life and health, have been announced by the National Child Health Council, with headquarters in this city. With an appropriation of \$200,000 set aside for this purpose the Council, composed of six leading national health bodies, will assist some American community of between 20,000 and 30,000 population and the surrounding county in securing as nearly as possible ideal conditions for the development of its children, from babyhood to adolescence, into sturdy, happy, useful citizens.

The first step will be the selection by a committee of experts of the community in which the demonstration will be carried on over a period of five years. Geographical limitations are not imposed in the selection of the community but the Council believes the following qualifications will insure that the results are of greatest benefit to the entire country:

The town or city should be located in a county of between 50,000 and 60,000 population. The population should be fairly stable.

The age distribution of the population should be fairly near the average, especially as to the percentage of children and babies.

There should not be any strikingly predominant racial stocks.

The city or town should have a normal percentage of its population engaged in manufacturing.

There should be a variety of industries in the city.

The surrounding area should be agricultural territory.

The town should be in a birth registration state and should have fairly complete vital statistics.

The mortality of infants and children should

not be strikingly abnormal. Health conditions should not be abnormally good or bad and health machinery, including state laws, local ordinances and personnel, should be equal to those of a community of similar size.

The committee which will recommend the town to be chosen for the experiment consists of Dr. Richard A. Bolt, of Baltimore, general director of the American Child Hygiene Association; Miss Ella Phillips Crandall, of New York, formerly director of the National Organization for Public Health Nursing; Dr. Charles J. Hatfield, New York, director National Tuberculosis Association; Owen R. Lovejoy, New York, general director National Child Labor Committee; Miss Sally Lucas Jean, of New York, director Child Health Organization; Dr. Haven Emerson, former health commissioner of New York, and Dr. Donald B. Armstrong, Framingham, Mass.

The direction of this novel health experiment will be under Clarence King, who is widely known in the field of research and the administration of health and social work. He holds degrees from the University of Wisconsin and Columbia University.

Member societies of the National Child Health Council are: The American Child Hygiene Association, American Red Cross, Child Health Organization of America, National Child Labor Committee, National Organization for Public Health Nursing, and the National Tuberculosis Association.

MEMBERSHIP CHANGES, MARCH

NEW MEMBERS

Andrae, Robt. L., City Hospital, St. Louis.
Bellinger, James F., 2651 Armand Pl., St. Louis.

Burrows, Montrose T., Washington Univ. Med. School, St. Louis.

Burns, Jonathan Edw., 406 Waldheim Bldg., Kansas City.

Clinton, Lloyd B., Carthage.

Cowan, Howard K., Ash Grove.

Ebel, Joseph A., City Hospital, St. Louis.

Furnall, David E., 755 Century Bldg., St. Louis.

King, Samuel J., 7317 Dorset Ave., St. Louis.

Kleinschmidt, Clinton, 4153 N. Grand Ave., St. Louis.

Kennedy, R. W., Marshall.

Mason, Roy E., 414 Wall Bldg., St. Louis.

Moss, Merton C., 306 Metropolitan Bldg., St. Louis.

Mockbee, G. M., Hillsboro.

O'Neill, John R., City Hospital, St. Louis.

Pierce, Don, Gorin.

Rutledge, J. E., Festus.

Rodgers, C. H., Festus.
 Scott, Clive Douglas, Louisiana.
 Sellers, Claude L., 500 Carleton Bldg., St. Louis.
 Sullivan, Hazard, Miami.
 Thompson, J. Maurice, 5653 Delmar Ave., St. Louis.
 Taylor, Fletcher B., 721 Lathrop Bldg., Kansas City.
 Turner, John W., Louisiana.
 Vaughan, Walter W., 1259 Kingshighway, St. Louis.
 Vanderbeck, Cornelius C., 1793 S. Grand Ave., St. Louis.
 Vohs, Carl F., Lister Bldg., St. Louis.
 Walter, Archie L., Sedalia.

CHANGES IN ADDRESS

Boehm, Joseph L., St. Louis, to 540 Park Ave., New York City.
 Bonnot, Edmond, 3329 Park Ave., St. Louis, to 3635 Castleman Ave.
 Blair, Vilray P., 405 Metropolitan Bldg., St. Louis, to 400 Metropolitan Bldg.
 Braun, Harry E., Wash. Blvd. and Wayne Ave., Independence, to Presbyterian Hospital, New Orleans, La.
 Clemens, James R., 4915 Argyle Ave., St. Louis, to 4616 Pershing Ave.
 Campbell, A. V., 430 Globe-Democrat Bldg., St. Louis, to 952 Arcade Bldg.
 Coats, C. C., 716½ Felix St., St. Joseph, to 109½ North 8th St.
 Cowan, R. D., Greenfield, to Aurora.
 Chapman, Thos. E., Frisco Bldg., Joplin, to 529 Highland Ave., Kansas City.
 De Honey, F. R., Fredericktown, to Marquand.
 Davis, Robt. C., 400 Portsmouth Bldg., Kansas City, to 416 Argyle Bldg.
 Eimer, Charles E., Mo. Baptist Sanitarium, St. Louis, to Frisco Hospital.
 Ewing, A. E., 5956 Cabanne Pl., St. Louis, to 7250 Westmoreland Drive.
 Fry, W. W., Dilley, Texas, to 3904 Hartford St., St. Louis.
 Fassett, Chas. Wood, 536 Ridge Bldg., Kansas City, to 115 E. 31 St.
 Finney, Wm. Ozro, Chaffee, to Fornfelt.
 Graff, John H., St. Mary's, to U. S. Public Health Service, St. Louis.
 Hennerich, Walter E., Cor. Grand and Utah, St. Louis, to 3853a De Tonty St.
 Hans, Willard J., 700 Kingshighway Park, St. Louis, to 4532 Virginia.
 Howden, T. L., Noyes Hosp., St. Joseph, to 825½ Frederick Ave.
 Hill, Wm. H., 407 Argyle Bldg., Kansas City, to 6th and Edmond Sts., St. Joseph.
 Hardesty, Wm. L., Weston, to Evansville, Ind.

Hall, E. P., 702 Waldheim Bldg., Kansas City, to 124 W. 33rd St.
 Harned, Will J., Maitland, to Bethany.
 Holt, P. W., 1303 Prytania St., New Orleans, La., to Rutledge, Mo.
 Hunt, C. J., 937 Rialto Bldg., Kansas City, to Canadian, Texas.
 Jones, Geo. H., Jefferson City, to 910 Equitable Bldg., St. Louis.
 Kearby, H. D., Noyes Hosp., St. Joseph, to Bartlett Trust Bldg.
 Kehrer, J. K. W., Boonville, to General Delivery, Rochester, Minn.
 Kinard, K. W., 310 Rialto Bldg., Kansas City, to 3520 Main St.
 Kopelowitz, J. C., 5204 Enright, St. Louis, to 726 Limit Ave.
 Lynch, L. A., 1225 Rialto Bldg., Kansas City, to 1014 W. 39th St.
 Lavan, John, Sportsman Park, St. Louis, to 719 Metropolitan Bldg.
 Newell, Quitman U., 411 Wall Bldg., St. Louis, to 304 Wall Bldg.
 Pickrell, Claude D., 735 Century Bldg., St. Louis, to 653 Century Bldg.
 Patton, Wm. G., Cape Girardeau, to Winkelman, Arizona.
 Pugsley, F. N., 531 Knickerbocker, Kansas City, to 3720 Wyandotte.
 Ragan, R. C., 74th and Broadway, Kansas City, to 75th and Broadway.
 Rotteck, Julius, Grand and Victor Sts., St. Louis, to 3830 Connecticut St.
 Streutker, Chas. E. F., 3772 S. Broadway, St. Louis, to 3860 S. Broadway.
 Sevin, Omar R., 408 Humboldt Bldg., St. Louis, to 509 Schweiter Bldg., Wichita, Kan.
 Schnoebelen, P. C., 304 Humboldt Bldg., St. Louis, to 923 University Club Bldg.
 Schwein, Bertha O., 3919 Forest Ave., Kansas City, to Moe Hospital, Sioux Falls, S. D.
 Tilles, Randall S., Metropolitan Bldg., St. Louis, to University Club Bldg.
 Threadgill, Jesse M., University Club Bldg., St. Louis, to 1050 East Park Place.
 Thym, Herman H., 2947 Flora Ave., Kansas City, Mo., to 522 Altman Bldg.
 Tainter, F. J., Jefferson Barracks, to 220 Madison St., St. Charles.
 Woodson, Chas. R., 109½ W. 8th St., St. Joseph, to 315 N. 5th St.
 Weary, F. G., 5401 Swift Ave., St. Joseph, to King Hill and Colo. Aves.
 Williams, J. R., 829 Rialto Bldg., Kansas City, to 703 Lathrop Bldg.

NO LONGER MEMBERS

Arnold, Zachary T., Amity.
 Bryan, Enoch M., Blytheville, Ark.
 Courshon, Alexander J., Springview, Neb.
 Davidson, James H., Silliam.

Freeland, Pleasant L., address unknown.
 Gilman, Daniel C., Portland, Oregon.
 Isley, Chas. F., Kansas City.
 Lowenstein, Paul S., New York City.
 Moennighoff, Fritz J., Odessa.
 Orrick, G. W., Crocker.
 Searcy, Wm. P., Exeter.
 Sewell, Minor F., Malta Bend.
 Wolfe, B. F., Jasper.

DECEASED

Elder, John T., Syracuse.
 Enloe, Isaac N., Jefferson City.
 Foreman, Charles O., Warrenton.
 Meisch, August, Manchester.
 Ross, John B., Swedeborg.
 Waggoner, E. H., Civil Bend, R. F. D., Pat-
 tonsburg.

OBITUARY

ISAAC N. ENLOE, M.D.

Dr. Isaac N. Enloe, of Jefferson City, for many years one of the most prominent practitioners in Central Missouri, died at St. Mary's Hospital in Jefferson City, February 15, 1921, after an illness of two years, aged 61 years. Dr. Enloe was a graduate of the Washington University Medical School, 1883, and entered private practice at St. Thomas, Mo., where he remained until 1890 when he moved to Jefferson City. He was honored by his profession in many ways, and the people trusted and loved him for his splendid worth as a physician and citizen who was always interested in promoting the welfare of the community. One son, Roscoe, was killed in the Argonne drive during the world war in 1918, a loss that fell heavily upon Dr. Enloe, and seems to have been the beginning of a breakdown from which he never recovered. Another son, Dr. L. David Enloe, is president of the Cole County Medical Society, and a nephew, Cortes Enloe, is practicing in Jefferson City. Dr. Enloe was a member of the Cole County Medical Society, the State Association, and a Fellow of the American Medical Society.

ELLERY H. WAGGONER, M.D.

Dr. Ellery H. Waggoner, of Civil Bend, Mo., one of the pioneer physicians of Daviess County, died at his home December 21, 1920, of chronic parenchymatous nephritis, aged 73 years.

He was a member in good standing of the Daviess County Medical Society and was an earnest, conscientious physician of considerable ability; he was in general practice until a few years ago when he practically retired to

office practice until he was confined to his home and bed six months before his death.

He will be greatly missed in the community which he served faithfully for a great many years.

LAURENCE A. LYNCH, M.D.

Dr. Laurence A. Lynch, who only recently came to Kansas City and joined the Jackson County Medical Society, died very suddenly at his home, 3524 Pennsylvania Avenue, January 3, 1921.

After receiving a liberal preliminary education, Dr. Lynch attended the Creighton University, Omaha, from which he graduated in 1914. He soon after became an interne in St. Margaret's Hospital. Having a good mental and moral equipment he entered upon his life work in Kansas City, Missouri, where he had already endeared himself to many members of the profession by his fine qualities.

The loss of a member of our Society by death is always deplorable. It is doubly so when one so young, being but 29, and with noble aspirations for the future, is cut down.

Dr. Lynch was a member of the Kansas City Academy of Medicine, Missouri State Medical Association and the American Medical Association. His many friends deplore his death and extend to his widow, daughter, father and mother and brother, Dr. Thomas J. Lynch, their deepest sympathy.

NECROLOGIC COMMITTEE,

A. A. FREYMAN,
 C. LESTER HALL,
 WILLIAM F. KUHN.

—*Bulletin Jackson County Medical Society.*

BERNARD H. ZWART, M.D.

Dr. Bernard H. Zwart, a member of this Society for over a quarter of a century, died at his home on February 23, 1921. He is survived by his widow, a daughter, Mrs. E. P. Helmers, and three sons, Bernard C., Albert W. and Sanford N.

Dr. Zwart was born in St. Louis sixty-two years ago and received his early education in the public schools of that city, the University of St. Louis and the University of Milwaukee. He graduated from the St. Louis Medical College in 1881, locating in Kansas City at once and has been in active practice until his final sickness which lasted about a month.

Aside from following his professional duties he held the office of coroner of Jackson County from 1909 to 1913, and was professor of medicine in the College of Physicians and Surgeons, Kansas City, Kansas, from 1897 to 1901

and in the University Medical College from 1901 to 1909.

He was a member of the Kansas City Academy of Medicine and served as president in 1901, and was a member of the Missouri State Medical Association and a Fellow of the American Medical Association.

Dr. Zwart had a large practice, and his duties to his patients were faithfully, conscientiously and ably performed. In his association with his brother practitioners, he was honest, fair and gentlemanly.

In the death of Dr. Zwart our Society loses a gentleman. To his widow, daughter and sons we extend our sincere sympathy in this, their great bereavement.

NECROLOGIC COMMITTEE,

A. A. FREYMAN,
C. LESTER HALL,
WILLIAM F. KUHN.

—*Bulletin Jackson County Medical Society.*

AUGUST F. MEISCH, M.D.

Dr. August F. Meisch was born in 1849 in Freistadt, Germany, obtaining his preliminary and medical education in Germany. He served in the Medical Corps of the German Army until 1871, then he came to America. He located first in Cincinnati but after practicing there a short time came to Manchester, Mo., in 1872 where he remained to the time of his death. In 1873 he attended the Missouri Medical College and in 1883 took a postgraduate course in St. Louis. He was the second coroner of the county elected after the separation of the county from the city of St. Louis. The following resolutions were adopted by the St. Louis County Medical Society:

"Whereas, It has pleased the Almighty to remove from our presence our most revered and respected member and co-worker, Dr. August F. Meisch, therefore, be it

"Resolved, That in his death the medical profession has lost one of its most loyal and respected members, one of the oldest members of the St. Louis County Medical Society, and a highly respected citizen; and that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of the Society and sent to the *Journal of the State Medical Association.*"

MISCELLANY

BILLS INTRODUCED BY THE CHILDREN'S CODE COMMISSION IN THE FIFTY-FIRST ASSEMBLY

The interesting report presented to the Children's Code Commission by its executive secretary, Mrs. Harriet M. Robertson, gives a comprehensive exhibit

of the splendid work done by her and by the commission at the recent session of the legislature. The report in full follows:

Bills Which Passed Both the House and Senate

Senate Bill 99, provides a home for neglected and dependent children, from which children may be adopted by persons who, upon investigation, have been proven fit to have custody of such children. Bill carries an appropriation of \$50,000.00.

Senate Bill 159, relating to inheritance of children born out of wedlock, giving them right to inherit property when parentage has been properly established by due process of law.

Senate Bill 248, relating to services of minor children whether born in lawful wedlock or not.

House Bill 334, provides penalty for wife desertion or abuse and neglect of children by parent; also provides punishment for those who contribute to delinquency of children, and provides for extradition from other states of man deserting wife and children.

House Bill 154, provides punishment for those contributing to delinquency of minors between seventeen and twenty-one years of age.

House Bill 155, provides punishment for persons who contribute, directly or indirectly, to child delinquency, or who willfully neglect to prevent delinquency.

Senate Bill 98, requires treatment of eyes of newborn infants with prophylactic approved by state board of health, preventing blindness from ophthalmia neonatorum.

Senate Bill 101, provides that age of consent for girls shall be raised from fifteen to sixteen years.

House Bill 212, amends Juvenile Court Act, making it possible for the Circuit Court to call a term of the Juvenile Court when needed. The present law provides for a term every six months.

House Bill 153, provides for state supervision of hospitals and maternity homes.

House Bill 157, makes it unlawful for man or woman to intermarry, either of whom is insane, mentally imbecile, feeble-minded or epileptic.

House Bill 156, relates to marriage of feeble-minded, prohibiting the issuing of marriage licenses to them.

Senate Bill 160, substitute bill for the two bills on child labor originally presented by the Children's Code Commission, and which was presented by the Central Labor Council—restricts the employment of children in dangerous occupations, and provides that they could only be employed after having complied with the compulsory school attendance law.

House Bill 214, relates to special classes in public schools, amending law passed in 1919, making law apply to crippled and speech defective children, as well as subnormal children.

House Bill 159, makes null and void common law marriages hereinafter contracted. The rights of children have been cared for in Senate Bill 159, relating to inheritance of children born out of wedlock.

Senate Bill 96, requires married or unmarried women to be 21 years of age and of sound mind to devise or bequeath property.

House Bill 147, raises the age of majority of women from 18 to 21 years.

Senate Bill 156, provides for establishing boards of public welfare in cities of second and third class.

Senate Bill 153, provides for county superintendent of public welfare and county boards of public welfare.

Senate Bill 224, provides for supervision of child-caring institutions.

Bills that Failed for Final Passage

House Bill 331, Senate Bill 303, providing for a Bureau for Mental Defectives, was bitterly opposed in both House and Senate. In view of the fact that the entire public school system of the state is about to undergo a radical change, owing to the passage of the County Unit Bill, it will be possible to get a much better bill passed at the next session of the legislature, carrying the proper appropriation, than we could possibly get now. This will give us time to properly educate the state as to the necessity for this work.

House Bill 167, Senate Bill 102, permitting use of school houses for community, educational and social purposes, was strongly opposed, the reason given being that it was strongly socialistic in character.

House Bill 213, Senate Bill 157, providing for a separation of training school for boys from the Missouri Reformatory at Boonville, was opposed because of the great expense which would be incurred by the state. However, the present law provides that the institutions shall be absolutely separate, although it permits the employment of one superintendent for both institutions. We feel that, if this situation is properly brought to the attention of the new administration, it will be taken care of.

Of the group of four bills relating to children born out of wedlock, two have been passed. These bills were strongly contested and their passage means a distinct advance in this class of social legislation. The two more drastic bills could not be passed at this time.

The bill providing for the change of name of county boards of visitors to county boards of public welfare was caught in the jam the last day, and up to five o'clock Sunday morning we were not able to call it from the calendar and pass. The few remaining bills which failed of passage were either killed in committee or failed of engrossment.

Of the 285 bills passed at the present session of the state legislature, nineteen were presented by the Children's Code Commission. If these are signed by the Governor and become laws with the seventeen which were passed two years ago, Missouri will have upon her statute books a code of child's welfare legislation of which any state could justly be proud.

After these bills have been given a fair trial and careful consideration, we can so amend our present laws and present a few bills at each session which will be necessary to meet the necessities of our ever-changing social conditions.

THE CHIROPRACTOR BILL

Senate Bill No. 171

An Act

Defining and regulating the practice of chiropractic; etc.

Section 1. Defining and regulating the practice of chiropractic.—The practice of chiropractic shall be deemed to be the adjustment by hand of the articulations of the human spine according to chiropractic methods, but it shall not include operative surgery, obstetrics, osteopathy, nor the administration or prescribing of any drug or medicine now or hereafter included in materia medica. Chiropractors shall, subject to the limitations of this act, be entitled to all the rights and privileges of physicians and surgeons and shall be subject to all duties and obligations prescribed by the statutes of this state in so far as the same are not inconsistent with the provisions of this act.

Sec. 2. State board of chiropractic examiners

created.—A state board of chiropractic examiners is hereby created, consisting of three persons to be appointed by the governor in the following manner, to-wit: Within thirty days after the passage of this act, the governor shall appoint three persons who shall be known chiropractic practitioners, having practiced chiropractic continuously in this state for at least one year prior to such appointment, who shall constitute the first board of chiropractic examiners. Their term of office shall be designated by the governor so that the term of one member shall expire in one year, one in two years, and one in three years from date of appointment. At the expiration of the term of office of any member of the board the governor shall appoint a member for a term of three years. All vacancies shall be filled by the governor in like manner, and the person appointed to fill such vacancy shall serve for the unexpired term only.

Sec. 3. Organization of board, duties and salaries.—The board shall organize by electing a president, secretary and treasurer each to serve for a term of one year. The treasurer shall be the custodian of all funds belonging to the board and shall execute a bond to the state in the sum of two thousand dollars, conditioned upon the faithful performance of his duties, which bond shall be approved by the board. The secretary shall keep an accurate minute of the transactions of the board and shall be the custodian of all books, records and other property belonging to the board, and shall receive a salary to be fixed by the board, of not exceeding fifteen hundred dollars per annum. Each member of the board shall receive as compensation for his or her services the sum of ten dollars per day and necessary traveling expenses while actually employed in the discharge of his or her duties as members of said board. The board shall have a common seal, shall adopt rules and regulations for the government of its actions. The president and secretary shall have the power to administer oaths. A quorum shall consist of two members. The board shall meet and organize in Jefferson City, Missouri, within thirty days following their appointment, and shall meet at such other times and places within the state of Missouri as a majority of the board may direct. They shall publish such dates for examination and places of meeting in some newspaper of general circulation at least thirty days prior to said meeting. The board shall create no expenses exceeding the sums received from time to time as fees herein provided. A license to practice chiropractic within this state shall be issued to the individual members of said board at the first meeting of said board upon the payment of the regular fee of twenty-five dollars, as provided for in this act.

Sec. 4. License when issued.—No person shall be engaged in the practice of chiropractic without having first secured from the board of chiropractic examiners a license as provided in this act. Any person desiring to procure a license authorizing him or her to practice chiropractic in this state shall make application therefor to the board on a form prescribed thereby, giving his or her name, age, which shall not be less than twenty-one years, residence, name of school or college of chiropractic of which he or she is a graduate, and shall furnish the board satisfactory evidence of good moral character and that he or she is a graduate of a chiropractic school or college which teaches a course of not less than three years' duration, in each year of which nine months or more shall be devoted to the study of chiropractic, requiring actual attendance in same, which shall be determined by the board, together with such other information as the board may require, which application shall be sworn to before some officer authorized to administer oaths.

Any applicant who matriculates in a chiropractic school or college after the passage of this act shall have preliminary educational qualifications equivalent to that of a regular four years' high school course, or pass the examinations prescribed by the board. There shall be paid to the said board by each applicant a fee of twenty-five dollars for examination, fifteen dollars of which shall accompany the application, and the balance of ten dollars shall be paid upon the issuance of a license. Any person failing to pass such examination may be re-examined within one year from the time of such failure without additional fee. The board shall subject applicants to an examination in the subjects of anatomy, physiology, symptomatology, physiological chemistry, hygiene, chiropractic orthopedy, pathology, principles of chiropractic, chiropractic analysis and diagnosis, as taught by chiropractic schools and colleges and shall further satisfy said board as to their knowledge and skill in chiropractic adjusting and nerve-tracing, by such methods as in the judgment of the board shall best reveal the applicant's knowledge, ability and skill to practically apply the same; provided, however, that the board shall grant a license without examination to persons who are graduates from a chiropractic school or college, and are able to satisfy the board that they are qualified and are regularly practicing chiropractic in this state, and have been for at least one year prior to the time this act shall go into effect; provided that such application shall be made within sixty days after the taking of effect of this act, and accompanied by the required fee as herein provided. Provided further that the board may grant a license to applicants on examination who have been practicing chiropractic in this state for less than one year prior to the passage of this act who satisfy the board of their qualifications; provided further that such application shall be made within sixty days after the taking of effect of this act and accompanied by the required fee as herein provided, and to students on graduation who are in attendance prior to the passage of this act in a chiropractic school or college that teaches a course of not less than three years of six months each; provided such graduates make application for examination within sixty days after graduation and accompanied by the required fee as herein provided. Provided, further, that the board may issue a license without examination to persons who have been regularly licensed to practice chiropractic in another state, territory or the District of Columbia, wherein the regulations for securing such license are equal to those required in the state of Missouri, provided such applicant shall furnish satisfactory evidence that he or she has continuously practiced chiropractic in such state, territory or District of Columbia, at least one year after securing such license, and that he or she is of good moral character, and upon the payment of the required fee of twenty-five dollars to the treasurer of the board. The board shall issue to such applicant who shall correctly answer seventy-five per centum of the questions propounded at such examination, and who shall have satisfied the board by practical demonstration as to his or her competency, a license to practice chiropractic.

Sec. 5. Fees and duties of the treasurer.—All fees shall be paid in advance to the treasurer of the board and by him turned into the state treasury to the credit of a fund which is hereby appropriated for the use of said state board of chiropractic examiners. The compensation and expenses of the members and officers of said board, and all expenses proper and necessary in the opinion of said board to discharge its duties under and to enforce the law, shall be paid out of such fund, upon the

warrant of the auditor of the state issued upon a requisition and signed by the president and secretary of said board under seal of the board.

Sec. 6. Registration of license.—Every person holding a license from the state board of chiropractic examiners shall have it recorded in the office of the county clerk in the county in which he or she resides, and in the cities of St. Louis, Kansas City and St. Joseph they shall record same with the secretary of the board of health, and the date of recording shall be indicated thereon. Until such license is filed for record, the holder shall exercise none of the rights or privileges conferred therein. The secretary of the board of health, the county clerk or health commissioner shall keep in a book provided for that purpose a complete list of all licenses recorded by him with the date of recording such license. A fee of one dollar shall be paid the official recording said license, which license shall at all times be displayed in the office of the holder thereof. All persons practicing chiropractic within this state shall pay on or before the first day of September of each year, after a license is issued to them as herein provided, to said state board of chiropractic examiners, a renewal license fee of two dollars. The secretary shall, thirty days or more before September first of each year, mail to all chiropractors in this state a notice of the fact that the renewal fee shall be due on or before the first day of September. Nothing in this act shall be construed so as to require that the renewal receipts shall be recorded as original licenses are required to be recorded.

Sec. 7. Revocation of license.—The state board of chiropractic examiners may refuse to grant or may revoke a license to practice chiropractic in this state, and it shall be their duty to carefully investigate all charges of immoral or illegal action of any one to whom a license to practice chiropractic in this state has been issued, when a copy of the complaint has been furnished and after due notice of the time and place having been set and the accused being given an opportunity to answer charges in person, or by attorney, an investigation having been made, and it has been proven beyond a reasonable doubt to the board that the accused is guilty as charged of any gross immorality or of shielding any one in illegal practice, or is guilty of any criminal or illegal action, they shall have the authority to revoke said license.

Sec. 8. Penalties.—Any person who shall practice or attempt to practice chiropractic, or any person who shall buy, sell or fraudulently obtain any diploma or registration to practice chiropractic under fraudulent representations, whether recorded or not recorded, or who shall use the title as doctor of chiropractic, or any word, title or letters to induce belief that he or she is engaged in the practice of chiropractic, without first complying with the provision of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than fifty dollars nor more than five hundred dollars, or be imprisoned in the county jail not less than thirty days nor more than one year. It shall be the duty of the several prosecuting or circuit attorneys of this state to prosecute all persons charged with the violation of any provision of this act, and it shall be the duty of the secretary of the board, under the direction of said board, to aid said attorneys of this state in the enforcement of this act. Nothing in this act shall be construed to interfere with any other method or science of healing in this state.

Sec. 9. Emergency.—There being no law upon the statute books in this state covering the subject of this act, an emergency is hereby declared to exist, and this act shall be in force from and after its passage and approval.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.

MISSOURI STATE MEDICAL ASSOCIATION

Sixty-fourth Annual Session, St. Joseph,
May 17, 18, 19

PRELIMINARY PROGRAM

Up to the time of going to press the scientific program of the annual meeting contained thirty papers, which are listed below. There have been some additions that will appear in the completed program to be published in the May issue.

Vilray P. Blair, St. Louis, "Types of Nasal Deformities"; John R. Caulk, St. Louis, "Kidney Surgery"; W. A. Clark, Jefferson City, "Sarcoma of the Brain with Secondary Actinomyces Simulating Lethargic Encephalitis"; O. Jason Dixon, Kansas City, "Complete Report of Fifty-Five Mastoidectomies"; Geo. Dock, St. Louis, Title not announced; E. Lee Dorsett, St. Louis, "Version in Selected Cases," with lantern slides; A. T. Fisher, Kansas City, "Diabetes"; R. M. Funkhouser, St. Louis, "Trachelorrhaphy"; A. L. Gray, St. Joseph, "Modern Methods of Conducting Labor"; Buford Hamilton, Kansas City, "Posterior Presentations"; A. E. Hertzler, Kansas City, "Atypical Toxic Goiter"; Leo Huelsmann, Colorado Springs, Colorado, "What Can Be Done for the Patient Suffering with Pulmonary Tuberculosis"; John S. Kimbrough, St. Louis, "The Importance of Early Treatment of Epithelioma of the Orbit," with lantern slide demonstration; F. M. Lowe, Kansas City, "Disturbed Pituitary Function Associated with Sphenoidal Sinus Abscess"; H. S. McKay, St. Louis, "Gall-Bladder Infection"; Neil Moore, St. Louis, "Carcinoma of the Bladder in the Relatively Young Adult with Report of Two Cases"; E. Lee Myers, St. Louis, "Status Lymphaticus"; F. G. Nifong and A. W. McAlester, Columbia, "Medical Education in Missouri"; Archer O'Reilly, St. Louis, "Scoliosis"; T. G. Orr, Kansas City, "A Technic for Leg Amputation," with lantern slides; Marsh Pitzman, St. Louis, "A Working Knowledge of Modern Anatomy," with lantern slides; Caryl Potter, St. Joseph, "Differentiation and Treatment of Carcinoma and Sarcoma of Colon"; F. Reder, St. Louis, "The Carl Berger Operation (Interscapulo-thoracic)," with report of a case and lantern slides; W. E. Shahan, St. Louis, "Thermophore Treatment of Ocular Neoplasms"; E. Schisler, St. Louis, "Visceroptosis with Study of One Hundred Cases"; Elsworth Smith, St. Louis, "A Case of Cardiolytic,"

with presentation of patient; Clinton K. Smith, Kansas City, "Cystitis: a Symptom or a Disease"; Sam H. Snider, Kansas City, "Some Observations in the Early Diagnosis of Pulmonary Tuberculosis"; N. M. Wetzel, Jameson, "Medical Ethics and Ideals."

A public meeting will be held on Tuesday night, May 17, when popular lectures will be delivered on the following topics: Cancer, by M. G. Seelig, St. Louis; Hospitals, by Herman E. Pearse, Kansas City; Internal Medicine, by William Engelbach, St. Louis.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-fourth Meeting, Monday, December 13, 1920

1. EXHIBITION OF CASES.

A. A CASE OF MULTIPLE INJURIES.

—By DR. E. P. LEHMAN.

A case showing the final result nine months after severe multiple injuries, was presented. Patient is a girl of seventeen who was struck in the street by an automobile and sustained the following injuries:

Fracture of right femur, compound.
Fracture of left femur, simple.
Fracture of skull (?).
Intracranial injury.
Fracture of clavicle, right.
Fracture of scapula, right.
Lacerated wound of forehead, ankles (right and left).

Abrasion of elbow.

Contusion of ulnar nerve, right.

The case was treated by excision and suture of the wounds and adhesive plaster traction in Hodgen splints. The hematoma surrounding the simple fracture of the left femur became infected with a streptococcus hemolyticus, although the compound fracture of the right thigh healed cleanly. Union of the right thigh was complete in six weeks. There was delayed union of the left thigh for which exploration was done sixteen weeks after the injury. This condition of delayed union was overcome by putting the patient on her feet in a Thomas caliper splint. There were no symptoms from the intracranial injury except those of concussion and a transient strabismus which cleared up in six weeks. The patient at the present time shows slight posterior angulation of the right thigh. Function is perfect, and she has no symptoms. She can walk without a limp, and can dance. Her legs are of equal length. Shoulder motions are perfect.

In the consideration of the case the following interesting points were emphasized:

1. Complete absence of surgical shock in the presence of severe multiple injuries.
2. A metastatic infection in the hematoma about a simple fracture, while a compound fracture was healing cleanly.
3. A type of delayed union overcome by putting the injured bone to work.
4. A perfect final functional result in the presence of a somewhat faulty anatomical result.

DISCUSSION

Dr. Graham: This case illustrates a number of very remarkable points that Dr. Lehman has mentioned in the beginning of his talk. In the first place, the almost perfect result which has been accomplished is most satisfactory when one considers the extensive anatomical deformity and the fact that at the beginning it seemed to be a fracture, the result

of which would be very dubious. Another thing of great interest is the fact that this case illustrates the old idea of a *locus minoris resistentiae*. The patient had a compound fracture of one femur and a simple fracture of the other. The simple fracture became infected with a hemolytic streptococcus with symptoms appearing on the third day.

Dr. Erlanger: I would like to ask Dr. Lehman if there were evidences of extensive contusion of muscle? This question is prompted by the view held in some quarters that absorption of products of muscular disintegration is the most important, if not the sole, cause of traumatic shock.

Dr. Lehman: I should say there was surprisingly little effect from traumatic shock.

B. A CASE OF THORACIC ANEURYSM TREATED BY WIRING AND ELECTROLYSIS.—By DR. EVARTS A. GRAHAM.

Male, age 65 years, coal miner.

Admitted to the hospital about one month ago on Medical Service where a diagnosis of aneurysm of the ascending aorta was made with Wassermann four plus positive in all antigens. Was treated with salvarsan, KI and mercury. His pain was much relieved but he was advised to have wiring of his aneurysm. Operation refused and patient was discharged, but was readmitted on November 27th to the Surgical Service.

Because of the absence of pulsation both clinically and as shown by the fluoroscope some doubt existed about whether the condition was one of aneurysm or of mediastinal cyst. The best course to pursue seemed to be to explore the tumor with a needle and be prepared to wire it if blood was obtained from the needle. If not, we proposed to carry out an anterior mediastinotomy for the purpose of removing the tumor. On December 9, under local anesthesia, an insulated hollow needle was inserted into the fourth intercostal space just to the right of the sternum after making a one inch vertical incision through the skin. Fresh blood was obtained through the needle but no spurting. Ten feet of silver and copper alloy wire were then passed into the aneurysm quickly. Thirty milliamperes of current were then turned on for the first five minutes, forty-five milliamperes for the next thirty minutes and thirty-five milliamperes for the next forty minutes. In all the current was passed through for a total of seventy-five minutes. Within twenty minutes after turning on the current, the patient stated that both the dyspnoea and pain were much improved. Previous to the operation the patient required about $1\frac{1}{2}$ grains of morphine per day. Following the operation up to the time of his discharge from the Surgical Service on December 18, he required never more than one-fourth of a grain of morphine per day. He is now feeling very much relieved as far as his pain is concerned but of course one cannot say how long his freedom from pain will persist.

This operation should be regarded merely as a palliative one but Finney and others have reported cases in which after three years there has been no pain and a considerable diminution in the size of the aneurysm. It seems to me that the procedure is one to be recommended in cases of thoracic aneurysms.

DISCUSSION

Dr. Dock: It is very pleasant to the medical side to see surgery taking up these cases. Everybody knows the helplessness of the internist in a case of well-marked aneurysm. Dr. Graham has told of the prospects of a good many of them after operating. It seems better to try to do something than to do nothing in all cases that permit action.

C. A CASE OF LEAD POISONING.—By DR. E. H. TERRILL.

J. Y., age 39; white; male; Hungarian; enamel burner; entered the hospital December 11, complaining of abdominal pain, nausea and vomiting.

P. H. General health good, no previous illness of consequence. Began work as an enamel burner 1906, continued until 1913 when he worked at molding solder. Attack of lead colic after eight months of this work. Went back to enamel burning, and continued until six weeks previous to onset of present illness, when he was laid off because of lack of work.

Used alcohol moderately; smoked pipe excessively.

P. I. began November 1, 1920, with anorexia, general abdominal pain, nausea and vomiting. Pain more severe in epigastrium, relieved somewhat by lying on abdomen. Very constipated. Vomited last time day before admission.

Physical examination shows a fairly well nourished man, skin sallow, no distinct jaundice, complaining of severe cramp-like pain in abdomen. Very dark lead line; teeth in bad condition. Heart and lungs negative; abdomen slightly resistant, especially in upper quadrants and epigastrium, more marked on right; tender to firm pressure. Some tenderness in right lower quadrant. Liver edge not felt. Spleen palpable at costal margin; edge firm, smooth, not tender. Few external hemorrhoids. No evidence of involvement of nervous system. The urine was negative. Blood showed white blood cells 8,000 to 12,000 with a normal differential, except for the presence of a few cells probably myelocytes. Haemoglobin 69 per cent. Red cells show very large percentage of stipple cells and much polychromatophilia. Wassermann negative. Temperature ranged from 99 degrees to 100 degrees.

Patient was given morphine for pain for the first few days, light diet, and a moderate amount of fluid. He had no more vomiting and the pain and nausea gradually disappeared. A few days later K. I. was given, about 60 gr. daily. The temperature became normal in a few days; W. B. C. fell to 7,400 and the blood picture improved.

He was discharged December 20, much improved.

DISCUSSION

Dr. Dock: This is an unusually well marked case of lead poisoning. The blood shows, it seems to me, that he has lead poisoning still, but it also looks very much as if he had an abdominal infectious process and needs observation for that. As in some other cases of lead poisoning we have had, the rules and laws regulating exposure to lead seem to have been neglected.

2. AN INVESTIGATION OF THE PALMARIS LONGUS MUSCLE IN THE LIVING.—By MCC. BATTS and J. W. THOMPSON.

The size, position and general relations of the palmaris longus muscle have been studied in living subjects and it appears on comparison of the data thus obtained with the accumulated data from dissecting laboratories that the margin of error in the method is very slight. The advantage of the method lies in the fact that it permits of studies on racial and familial groups such as could not be made by the usual method of dissection. Absence of the muscle is found on a study of 102 families to be definitely an hereditary trait, which seems to be due to the action of a single dominant factor. The inhibiting effect of this factor, which results in partial

or complete suppression of the muscle, is regulated by other influences of which sex is one of the most important. Absence of the muscle is common in the white race, relatively rare in the negro, and at least occasional in Indians and Japanese. A detailed analysis of the data will appear in the *American Journal of Physical Anthropology*.

DISCUSSION

Dr. Terry: Although this interesting paper does not deal with the question, nevertheless it may not be out of order to ask what theory seems best to account for the absence of the muscle; what the mechanism of its non-appearance may be.

Mr. Batts: Several specimens have been noted in the dissecting laboratory which may possibly throw some light on the question raised by Dr. Terry. If I may refer to our demonstrations on the table, it may be pointed out that in one of them, from which the palmaris longus seems to be lacking, there is to be seen a small slip from the anterior aspect of the flexor digitorum sublimis passing through the wrist and into the hand. This has been interpreted by Mr. Thompson and myself as a greatly reduced palmaris longus which is disappearing into the flexor digitorum sublimis.

Dr. Terry: It seems to me that the interesting condition which Mr. Batts has just referred to as a fusion of the palmaris longus with the flexor digitorum sublimis may possibly be evidence of incomplete separation of the former from the superficial antibrachial muscle mass; in such cases it might be indicative of the lack of, or lagging of the muscle differentiating factor among the people in whom a palmaris longus is absent or conjoined with the superficial flexors, as in the specimens shown here.

Dr. Danforth: With reference to Dr. Terry's comment, there would seem to be two possibilities, either the muscle may be wholly absent and unrepresented by any tissue whatever or it may be always present but sometimes only as an undifferentiated element of the superficial flexor group. The genetic studies of Mr. Batts and Mr. Thompson might suggest the second alternative, which is essentially Dr. Terry's suggestion since these studies seem to indicate that the absence of the muscle is due to some kind of inhibition. In any event one point is clear, viz., that two alternative conditions are definitely hereditary, but that the exact form of manifestation is influenced in some measure by incidental factors such as sex and even sides of the body.

3. SYPHILIS AS AN ETIOLOGICAL FACTOR IN NODULAR CIRRHOSIS OF THE LIVER.—By DR. L. J. OWEN

The belief that chronic infection is an etiological factor in the production of liver cirrhosis has been supported by bacterial observations and experimental work on animals. It has been shown that the liver cells and the endothelial cells of the liver are phagocytic to bacteria and thus receive more bacteria, the spleen possibly excepted, from acute and chronic infection than any other tissues in the body. The possibility that a combination of intoxication and infection might produce cirrhosis was suggested by Opie.

Syphilis as an etiological agent in the production of liver cirrhosis has been denied by some writers and affirmed by others.

The present discussion deals with the type of cirrhosis known as nodular, atrophic, alcoholic, or Laennec's cirrhosis. The data was obtained from 1,200 autopsies done in the pathological laboratory of Washington University. It was found that 8.5 per cent. of all adults had cirrhosis of the liver, and of these 80 per cent. were of the nodular type.

Nineteen cases of true nodular cirrhosis were found and history briefs of each written up. A study of percentages from the table reveals a high incidence of syphilis, excessive use of alcohol, and a combination of the two. Fifty-eight per cent. of all cases in which syphilis was adequately searched for were positive for syphilis, and thirty-seven per cent. of the total were syphilitic. Of all cases where inquiry was made, thirty-seven per cent. gave a positive history of alcoholism, this number equaling twenty-six per cent. of the total.

There was a high incidence of endocarditis, and a smaller number of other conditions the result of infection, accompanying the cirrhosis.

The frequent association of syphilis with nodular cirrhosis (present in forty per cent. of nineteen instances of nodular, Laennec's cirrhosis) indicates that it is an etiological factor in the production of the hepatic lesion.

4. FURTHER OBSERVATIONS ON THE MOVEMENTS OF THE COMPRESSED ARTERY DURING INDIRECT ESTIMATIONS OF THE BLOOD PRESSURE.—By DR. JOSEPH ERLANGER.

Previous reports on this subject* have been based upon records obtained by means of the mirror lever compression chamber which inscribes the movements of points along the upper apex of the tube or pneumatically compressed artery in situ. In these records it is difficult to distinguish between the movements of the upper apex that are produced by pulsatile and other movements of the contents of the artery and those produced by accidental translational movements of the artery as a whole. A basis for the dissociation of these two types of motion has now been obtained by means of shadow records inscribing simultaneously the pulsatile and other displacement of the walls of the pneumatically compressed artery at its upper and lower apices in any given plane of section at right angles to its length. These records confirm in every essential detail the conclusions as previously reported.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society started the year 1921 with a roundtable dinner at the Snapp Hotel, Excelsior Springs, Monday evening, January 31. About twenty members were present.

One of the first acts of the meeting was to express in form of a resolution the best wishes of the Society for the early recovery of our vice president, Dr. J. H. Rothwell, who is undergoing treatment in a hospital in Kansas City; a cheery floral offering accompanied the resolution.

Dr. S. R. McCracken, of Excelsior Springs, read the paper of the evening on Care of Drinking Water. It was pronounced an able effort by the careful discussors which followed.

A committee on medical legislation was appointed by the chair, with Dr. R. W. Prather at its head. It will be the duty of this committee to keep in touch with the representatives in the legislature and to advise them of the wishes of the society.

The secretary presented at length a summary of the last year's progress and called the attention of the membership to some vital problems of our future. By vote, he was requested to re-read this paper at the next meeting in Liberty, the last Mon-

*Erlanger: Proceedings of the Washington University Medical Society. Journal Mo. State Med. Assoc., 1917, XIV, 137 and 257.

day evening in February. It is to be hoped that a good attendance may be had.

Dr. E. H. Miller, to whom we affectionately refer as the "Dean of Clay County Medicine," was present and gave one of his characteristic talks.

A vote of thanks was extended to our headquarters hotel, the Snapp, in Excelsior Springs, for hospitable entertainment.

The Clay County Medical Society enters its sixty-seventh year loaded to the muzzle with vim, fidelity and progress.

J. J. GAINES, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met in business session at the Major Hotel in Liberty, February 28, at 8 p. m., with a little more than the regular enthusiasm pervading the assembly. The work of this meeting was to formulate plans for the most successful future that we have anticipated.

Dr. John H. Rothwell, who has been under surgical treatment in Kansas City, was reported "getting well." The membership in entirety has a wonderful love for Dr. Rothwell, and much gratitude was expressed at his satisfactory convalescence.

A revision of our plan of meeting seemed to meet the approval of all present. Bi-monthly meetings were decided on as follows: Excelsior Springs, on the last Monday evening in April, with six o'clock dinner at Snapp Hotel; Smithville, last Monday in June, noon dinner and afternoon program; Kearney, last Monday in August, noon dinner and program; Excelsior Springs in October, with six o'clock dinner at Snapp Hotel, and round-table program; December meeting at Liberty, at Major Hotel, six o'clock dinner and election of officers. Our members should take note of these meetings and lose no opportunity to bring about their success.

Programs for each meeting will be prepared by committees in the locality of meeting, such committees to be appointed by the chairman of the Society. It is believed that this plan will prove to be of the greatest possible benefit to all members of the Society. We believe that six good meetings are much better than twelve hasty, poor ones.

Our censors are beginning to function and will spare no pains to check violations of the code of professional ethics. This is as it should be. Carelessness in matters of professional fairness and honor is too often overlooked. There should be no hesitancy between right and wrong.

We are glad to report "business as usual" and the Clay County Medical Society a unit for progress. Our committee on medical legislation is a distinct advancement, which believes in doing things by the personal contact method. The chairman has recently spent several days in Jefferson City, getting results. Our president is a "live wire."

J. J. GAINES, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

Jasper County Medical Society held its fourth meeting of the year January 25, 1921, at Joplin.

The meeting was called to order by the president, Dr. S. A. Grantham. Those present were: Drs. Grantham, Clark, Gregg, E. D. James, Leaming, Mallory, Williams, L. C. Chenoweth, R. M. James, S. H. Miller, Coombs, Neff, Barson, Hoshaw, Korn, Gray, Balsley, Dickerson and Tyree.

Dr. Mallory presented a very interesting case of hyperthyroidism in which there was marked exophthalmos, tremor, tachycardia and nervousness; pulse 130, blood pressure 140, no apparent enlargement of the thyroid gland.

The committee appointed to draw up resolutions recommending Dr. C. M. Ketcham's candidacy to the Missouri State Board of Health read its report which was approved.

The Committee on Public Health and Legislation reported that it had been instrumental in securing the arrest of two chiropractors one of whom was arrested twice.

Dr. L. C. Chenoweth made a motion that the secretary be instructed to write the senator and representative from this district asking them to confer to the State Board of Health in this Society before taking any action on pending legislation concerning chiropractors.

On motion the meeting adjourned.

Meeting of February 1, 1921

The fifth meeting of the year of Jasper County Medical Society was held February 1, 1921, the president, Dr. Grantham, presiding. The total attendance was 25.

Dr. J. A. Chenoweth reported a case in which he presented the liver and pancreas of diffuse carcinomatous infiltration of those two organs. The patient's chief complaint was bleeding from the gums, and only started having discomfort in right side accompanied with jaundice nine days previous to his death.

Dr. A. L. Carpenter was elected to reinstatement.

The Committee on Public Health and Legislation reported that it had been instrumental in having another chiropractor arrested.

JAMES I. TYREE, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

The sixth meeting of Jasper County Medical Society was held at Joplin, February 8, 1921, at the Y. M. C. A., Dr. Grantham presiding. Total attendance, 35.

An extremely interesting paper on artificial pneumothorax with a report of several cases in which this treatment was used, was read by Dr. Varney Hazlewood, who has been having some very satisfactory success at the Jasper County Tuberculosis Hospital in the use of this method. He advises it in all cases where the active process is confined to one lung.

The secretary was instructed to send Senator Gray a telegram with the name of every member of the Society signed to it protesting the possible passage of the Chiropractor Bill.

Meeting of February 15

The seventh meeting of the Jasper County Medical Society was held February 15, 1921, at the Joplin Y. M. C. A., Dr. Grantham presiding. Total attendance, 25.

A paper on pyorrhea was read by Dr. Barnett and one on focal infection of the teeth was read by Dr. Brown. Drs. Brown and Barnett are dentists and their papers proved extremely interesting to the medical profession.

JAS. I. TYREE, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

The eighth meeting of 1921 of the Jasper County Medical Society was held at Joplin February 22. Dr. Grantham presided. The minutes of the last meeting were read and approved. The evening was devoted to the report of cases. Attendance, 25.

Meeting of March 1

The ninth meeting of 1921 was held March 1 at the Joplin Y. M. C. A., Dr. S. A. Grantham presiding.

Dr. Mallory reported four cases of reinfection of syphilis. Case one was a man twenty-three years whose past history was negative. Examination revealed an indurated ulcer on the foreskin of two days' standing. Dark field examination of this demonstrated spirochetes. The patient was given five injections of neosalvarsan during May and June, September, November and December. He had negative Wassermanns. Two years later he had a second sore similar to the first and spirochetes were again found. Following salvarsan and mercury he again showed negative Wassermann. The other three cases reported were similar to the first. No spinal punctures were made.

Dr. A. L. Korn read a paper on the laboratory diagnosis in syphilis and emphasized the following facts: That the first diagnosis should always be made by means of the dark field before the Wassermann becomes positive; that you always find the spirochetes in a primary ulcer that has not been treated; that the Wassermann becomes positive at the end of the first week in 25 per cent. of cases, and 50 per cent. at the end of the second week, and by the end of the fourth week he has never missed getting positive Wassermann.

The discussion was entered into by Drs. Gregg, Hazlewood, Barson, Post, James, Lauder milk, Cummings and Balsley.

Dr. Hazelwood stated that he thought syphilis helped the formation of fibrous tissue in pulmonary tuberculosis.

The application of Dr. P. L. Pritchett, of Webb City, was read for the first time.

The Society voted to have Dr. Barney Brooks from St. Louis address it at some date in the near future. Total attendance, 39.

JAS I. TYREE, M.D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY

The regular session of the Johnson County Medical Society was held in the Court House at Warrensburg, March 8. The president, Dr. Haughey, called the meeting to order.

The entire time was taken up in discussion of the need of a county hospital. A committee consisting of Drs. Schofield, Patterson and Draper was appointed to further inquire into the matter and report at the next meeting. The Society hopes to bring this proposition to a vote at the next election.

Visitors: Dr. Harrison and county nurses Misses Bryant and Taylor.

Attendance, 12.

T. J. DRAPER, M.D., Secretary.

MARION COUNTY MEDICAL SOCIETY

Marion County Medical Society met in regular session on Friday, February 4, at 8 p. m., Dr. Hornback in the chair; others present were Drs. Hays, Waldo, Howell, Hardesty, Salyer, Bounds and Ross.

Dr. Bounds reported a case of cesarean section performed two weeks ago; twins had developed together so that the woman, a primipara of 23, could not be delivered per vaginam.

Dr. Hardesty reported an interesting labor case. We then discussed the Prohibition Act and adjourned.

MARY S. ROSS, M.D., Secretary.

MARION COUNTY MEDICAL SOCIETY

The regular meeting of Marion County Medical Society took place on Friday evening, March 4, at Hannibal, Dr. Roselle, of Palmyra, the president, in the chair. Others present were Drs. Hornback, Waldo, Chowning, Hardesty, Brown and Ross.

There was a general discussion of interesting cases and legislation.

MARY S. ROSS, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

Randolph County Medical Society held its regular monthly meeting in the Chamber of Commerce rooms at Moberly, Thursday evening, February 10, 1921, Dr. C. B. Clapp presiding in the absence of President Wood. Present, Drs. Clapp, Cuppaidge, Mitchell, Ragan, Streeter, Fleming, Bazan and Dixon. Drs. Davis of Madison and Hawkins of Salisbury, visiting.

A paper presented by Dr. Streeter on hiccoughs was very favorably received and a full discussion by both members and visitors.

A clinic presented of a man who had been horribly burned in a mine explosion with every degree of burns, which had been treated by the wax method showing complete healing with minimum scar tissue, elicited great interest.

Dr. Fleming will be the essayist at the March meeting.

C. H. DIXON, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at Lancaster, February 2, 1921, at the office of Dr. W. F. Justice and was called to order by the president at 2 p. m.

The following members were present: Drs. W. F. Justice, B. B. Potter, J. H. Keller, H. E. Gerwig and J. B. Bridges.

The minutes of the last meeting were read and approved.

A communication from the State Secretary, Dr. E. J. Goodwin, was read calling attention to House Bills No. 288 and 113. The purport of the bills was read and discussed after which the following resolutions were offered and adopted:

Whereas, House Bills Nos. 288 and 113 tend to lower the standard of the medical practice act or laws and,

Whereas, House Bill No. 279, which prohibits druggists from selling any patent medicine or drug except on the written prescription of a regular qualified physician, and while it is possible for it to work a financial gain to the doctors of the state, yet it will be an injustice and work harm to the druggists and their patrons, therefore be it

Resolved that we denounce and condemn each and all of these bills and instruct our secretary to communicate with our senator and representative and urge them to use all influence possible to defeat these measures.

The secretary-treasurer made a financial report and showed \$22.60 in the treasury.

The following officers were elected: W. F. Justice, president; H. E. Gerwig, vice president; J. B. Bridges, secretary-treasurer; J. H. Keller, delegate to state meeting, and B. B. Potter, alternate.

There were no papers read at this meeting, but a number of interesting topics were discussed and all present pledged themselves to try, to make the Society better this year.

The meeting adjourned to assemble May 11, 1921.

J. B. BRIDGES, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

A regular quarterly meeting of the Scott County Medical Society was held at the court house in Benton on January 18, 1921. The following were present: Drs. J. A. Cline, S. J. Wade, G. S. Cannon, P. M. Malcolm, W. S. Hutton, R. T. Frazer, A. A. Mayfield, U. P. Haw and E. J. Nienstedt; Dr. E. J. Goodwin, of St. Louis, was also present.

Dr. G. S. Cannon was elected delegate to the state meeting and Dr. P. M. Malcolm, alternate.

Dr. H. V. Ashley was elected a member of this Society by transfer from Butler-Stoddard County Medical Society.

The secretary was instructed to send Dr. Sylvester Doggett a certificate of good standing in the Society, and a vote of thanks was extended to Dr. E. J. Goodwin.

The secretary was instructed to write the state secretary requesting him to attempt to establish through the State Commissioner of Insurance five dollars (\$5.00) as the minimum fee for old line life insurance.

Sikeston was selected as the next place of meeting.

E. J. NIENSTEDT, M.D., Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its quarterly meeting at Marshfield on March 16, in the office of Dr. John R. Bruce. The meeting was called to order by the president, Dr. E. M. Bailey, the following being present: Drs. Atkins, Rabenau, Bailey, Williams, Schlicht, Welsh, Jolly, Werner, Highfill and Bruce. Drs. J. E. Brown and L. T. Melton of Marshfield were present as visitors. The minutes of our last meeting were read and approved and also the report of the treasurer.

Reports and discussions of cases took up the time till noon when we went to dinner at the Webster Hotel. The meeting was resumed at 2 p. m. and the regular business was taken up.

It was voted to hold our next meeting in June at Rogersville and if the weather permits to go to the big spring at Henderson, and that the families of the doctors be invited to that meeting.

J. R. BRUCE, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in regular session in Dr. Hubbard's office in Mountain Grove, Mo., at 2 p. m., February 3, 1921, with the following members present: J. A. Fuson of Mansfield, R. A. Ryan and L. T. Van Noy of Norwood, J. M. Hubbard, H. U. Daugherty, Chas. Palmer, H. G. James and A. C. Ames of Mountain Grove, and J. R. Talley of Mountain Grove, R. F. D. C. W. Russell of Springfield was a visitor.

The minutes of the last meeting were read and approved.

A case of obscure headache, brought in by Dr. Ryan was examined, but no definite idea as to cause was arrived at.

Dr. Russell read a paper on plastic surgery and showed some lantern slides illustrating some recent cases he has had in which very favorable results have been obtained.

Dr. Ames read a paper on the pathology, symptoms, diagnosis and prognosis of typhoid fever, and Drs. Palmer and James read papers on the treatment of typhoid fever.

After the papers were read, Dr. Ryan, who was not present when his case was examined, gave a re-

port on it and it was further discussed but still no diagnosis was made.

Drs. Van Noy and Ryan then reported a case of obscure infection beginning as a tonsillitis and ending in death.

A letter was read from Dr. Goodwin in regard to some pernicious bills pending in the state legislature and it was unanimously voted to instruct Dr. Fuson to write to our state senator and representative and urge them to vote against those bills.

A vote of thanks and appreciation was extended to Dr. Russell for his paper.

The meeting adjourned to meet at Ava, May 5.

A. C. AMES, M.D., Secretary.

BOOK REVIEWS

AMERICAN MEDICAL BIOGRAPHIES. By Howard A. Kelly, M.D., LL.D., F.A.C.S., Hon. F.R.C.S. (Edin.) and Walter L. Burrage, A.M., M.D. Baltimore: The Norman, Remington Company, 1920.

In 1912 the Cyclopaedia of American Medical Biography, by Howard A. Kelly, containing 1184 biographies, was published. The present work contains 1948 biographies and is carried through the year 1918. None of the subjects of the biographies are living at this time.

With a long list of collaborators the authors have produced a work which will long be used as a reference book by historians and others in search of biographical data. It is undoubtedly a difficult task to satisfy everybody. Each one of us has individual notions and inclinations. There is a natural tendency to have favorites among the very illustrious as well as the lesser lights in history. We all want our own community to have all that it deserves, and as Missourians we feel a little neglected with only 44 represented among nearly 2000. To Warren B. Outten is credited the chapters on William Beaumont and Adam Hammer, but the authors appear to be wholly ignorant of the fact that Outten who was a pioneer railway surgeon and writer, and that such a prominent figure passed away in 1911. The paragraph on John T. Hodgen was written by A. J. Steele, but we find no mention of the latter, who stood in the front rank with the great orthopedic surgeons of this country. We are also grieved to see that J. P. Bryson, H. H. Mudd, Louis Bauer, P. G. Robinson, Chas. O. Curtman, J. B. Johnson, and Ellsworth E. Smith are omitted. Then there is quite a list of others for whom we would request recognition. W. S. Allee of Olean may not have been a teacher or a prolific writer but his influence in the advancement of medicine and the betterment of medical conditions will be felt for a longer period than is the case with many of the numerous Easterners.

Some glaring faults need correction. On page 722 we find that Frank J. Lutz "in 1811 was appointed professor," but he was not born until 1855. On page 722 we are told that Dr. W. W. Mayo "acted as assistant to Professor John Hodges" which should read "John T. Hodgen." Of Charles A. Pope we learn that "he died in Paris, Missouri," while this really occurred in Paris, France. In the local index J. P. Jervy, Charleston, S. C., and T. G. Richardson, Louisville, Ky., are credited to Missouri but omitted from the list of their proper states. On page 126 we are told that M. A. Edward Borck was "married in 1854; his widow, Dr. Henrietta Stoffregen Borck, survives him." Yes, she still survives but was not born until a number of years after 1854.

For further editions of this book collaborators should be selected who are familiar with local conditions and capable of preparing accurate data for publication.

A SHORT HISTORY OF NURSING. From the Earliest Times to the Present Day. By Lavinia L. Dock, R.N., Secretary, International Council of Nurses. In Collaboration with Isabel Maitland Stewart, A.M., R.N., Assistant Professor, Department of Nursing and Health, Teachers College, Columbia University, New York. New York and London: G. P. Putnam's Sons, The Knickerbocker Press, 1920. Price, \$3.50.

This compact volume is a résumé of a four volume work "History of Nursing." The study of this book will give nurses a clear idea of what is expected of them, and also a reason why nursing today is not considered an occupation but a profession. One cannot read this excellent book without appreciating the great value of the nursing profession to the medical profession. To the physician the reviewer recommends a careful study of this work.

Nurses, both graduate and undergraduate, will have a greater stimulation to better work with the knowledge of the great sacrifices women have made from the earliest time to bring nursing to what it is today.

The chapters on the future problems of nursing distinctly show the attitude of the authors regarding the "short cuts" to nurses' training, their idea being that only a well-trained worker should finally be graduated from schools of nursing and that not less than three years of work can fit a person properly. J. J. S.

CHEMICAL PATHOLOGY. Being a Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Fourth Edition, Revised and Reset. Octavo of 695 pages. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$7.00 net.

This work should be of the greatest aid to all learners in ophthalmology. Written by a teacher who understands his subject fully and is able to impart his knowledge in a simple and understandable way to others, this book will help greatly in the advance of ophthalmic practice. The work might best be designated as an unabridged hand-book of eye diseases because of its suitability to be followed in the active practice of clinic or consulting room. Dr. Ramsey is a very conscientious, accurate and capable specialist, who has passed many busy years in ophthalmology. Based upon such a physician's own experiences this work is a valuable addition to medical literature.

The author has arranged his subject matter around the headings of differentiating-symptoms—a method which is much the most practical. Every ophthalmic disorder is treated thoroughly and at length; therapy is taken up in greater detail than is usual in textbooks on eye diseases. The style of writing is very simple and readable, giving clear and definite pictures of each disorder. The illustrations are beautifully executed, many being in natural colors.

The intimate relationship between the eye and the rest of the body is strongly emphasized for the author is well fitted to do so, since he was engaged for ten years in general practice.

This would seem to be the book par excellence for the physician entering ophthalmology; but any oculist whatever his experience will find it most interesting and helpful. H. D. L.

THE ENDOCRINES. By Samuel Wyllis Bandler, M.D., F.A.C.S., Professor of Gynecology in the New York Post-Graduate School and Hospital. Octavo of 486 pages. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$7.00 net.

At the symposium on the endocrines at Chicago before the Mississippi Valley Medical Society, Dr. Cannon of Harvard remarked that the discussion showed how fruitful the subject of endocrinology was in speculation, and that the need was for increased tabulation of observation and experiment. After reading Dr. Bandler's book your reviewer would echo Dr. Cannon's sentiments. It is built on speculation and philosophy and is more interesting than convincing.

Dr. Bandler devotes some fifty pages to the discussion of the influences of environment and heredity—a discussion that reminds us of the similar discussion in Haeckel's "L'Angoisse nevrose." Pages 56 to 92 are devoted to an introduction to the story of the endocrines, the glands themselves discussed in pages 3 to 134, and the effect of internal secretions on the female occupy pages 135 to 231. The nervous effects are given in pages 232 to 286. The author reproduces some reports on his clinics (apparently from shorthand notes) and some cursory abstracts of case histories.

The volume will not help us to know the ductless glands better, but it may stimulate some reader to begin the study of the glands.

The paper, binding and appearance of the book are excellent. G. H. H.

CHIRURGIE REPARATRICE ET ORTHOPÉDIQUE. Appareillages et Invalidités. Ouvrage publié sous la direction de MM. Jeanbrau, Nové-Josserand et Ombrédanne, professeurs agrégés aux Facultés de Montpellier, de Lyon et de Paris. Secrétaire de la Rédaction: P. Desfosses, chirurgien de l'hôpital britannique à Paris. Two volumes in-8°, formant ensemble 1,340 pages, avec 1,040 figures. (MASSON ET CIE Editeurs 120, Boulevard Saint-Germain, Paris, VI^e, 1920.) . . 80 fr. net.

At the outset, the reviewer would state that he has approached his task with a mind sympathetic to all the attempts on the part of the French to "carry on," not only in the material upbuilding of the devastated areas, but in the line of scientific advance. This has perhaps made it difficult to put a just estimate upon the value of a book such as the one under discussion. A glance at the list of writers will dispel any doubt as to its being a standard publication, containing as it does the names of such men as Binet, Cunéo, Lemaître Ombrédanne, Leriche, Sencert, and other well-known surgeons.

The first impression one gains as one reads through the pages is that it is revolutionary; revolutionary in that it heroically discards surgical standards accepted up to the outbreak of the world war. The contributors have once for all gotten away from the old habit of *a priori* reasoning, and base their conclusions solely upon a clinical experience hitherto unknown in its variety and extent. Georges Gross in his chapter on Treatment of Wounds of the Joints, gives a brief sketch of the historical development of the management of this class of injuries, and starts, not with Ambroise Paré or any other surgeon centuries dead; he begins at the beginning—with August, 1914. Avant la guerre? That was before the deluge, beyond which there is no need to go. Three distinct stages mark surgical progress. The first comprises the first two or three months of the war, when, in regard to penetrating wounds of the joints, the old doctrine "Noli me tangere" caused "veritable disasters." Treatment of these wounds by simple dressings was marked by "rapid and terrible

septicemia and arthritides, which too long delayed intervention did not always avoid. Arthrotomy most often gave mediocre results. Resections, followed by evacuation far to the rear did no better."

In the second stage (period of débridement and drainage, 1915), with the perfecting of methods of transportation there was an abuse of multiple drainage and extended resections. "The results were deplorable." With the spring of 1916 and the terrible exigencies of Verdun there was developed the third period, characterized by operations designed to prevent infection, not to cure it; to preserve a member and restore its function. To quote the succinct words of Gross, "No more drains, no more irrigations with antiseptics. An arthrotomy, extensive from the outset, followed by mechanical disinfection of the joint, and extirpation of the track of the wound, the removal of foreign bodies and of free bone fragments, and the immediate closure of the synovial membrane."

As a whole the treatise is important as a presentation of the subject from a new viewpoint. It is not padded with old material rewritten. It is systematic, concise, splendidly adapted for the student. The use of bold-faced type to call attention to important points adds to its usefulness, not only to the student in the medical schools, but to every medical man whose studious habits do not cease when he receives his diploma. It is written in language definite, precise, even dogmatic. But one feels that it is the dogmatism of authority and is reminded by contrast of some articles in American textbooks of the past ten or fifteen years where one is informed, and feels a gratifying sense of elation at the discovery, that in the acute stage of some infectious diseases, aspirin "may be given," or that in certain abdominal conditions "turpentine stupes may be applied."

It is important also because it gives to the world at large an appreciation of the excellence of the work that has been and is being done by the French in the field of surgery, an appreciation that has not been very widespread in this country since the earlier part of the nineteenth century when to study in Paris was the acme of postgraduate work.

The article on Facial Restorations, by Ombrédanné, is exceptionally well illustrated, the technic of the various methods of forming flaps being indicated by clear-cut line drawings, and the results of operation shown by reproduction of photographs of numerous patients. It comprises some fifty pages. René le Fort, of Lille, in his article on "Intra-thoracic Projectiles and Their Delayed Removal" states that in his first one hundred cases of extraction of projectiles in or close to the mediastinum there were seven deaths, five of which followed extraction of the foreign body from the pedicle of the lung. In eleven cases where the projectile was in the heart (two within the heart cavity), he had but one death. In kineplasty some very ingenious developments are shown not the least of which are the so-called "phalangization" of the metacarpals, and grafting the great toe to take the place of the thumb.

The treatise is essentially French, based upon French experience. There are but few allusions to the work of foreign surgeons; it should be noted, however, that the Blake and Thomas splints, Matas' obliterative, and reconstructive aneurysmorrhaphy—which is termed "la méthode américaine"—and Judd's technic of repair of ventral hernias, are given credit for excellence and in the case of the latter an illustration or two inserted. There is a rather greater scarcity of statistics than we are accustomed to in American medical literature, but it must be assumed that with over a million and a half men killed or dead of wounds and disease, and a proportional number of wounded who came under surgical treatment,

the number of cases upon which conclusions are based is far above anything available before the war, and we would do well to realize that the principal object of the over-worked French surgeons was not to collect statistics but to get as many men as humanly possible restored to the service of the country at the firing line or in the reserve.

As a specimen of book making the work is commendable; the typography is excellent, the paper of good quality, and the illustrations abundant and illuminating. Like all French publications it is bound in paper covers, and it would seem to an American to deserve something better. The lack of an alphabetical index detracts somewhat from its usefulness, but there is a moderately full table of contents at the end of the second volume. An interesting feature is the inclusion of an appendix of the law of March 31, 1919, in re War Pensions.

An announcement by the publishers states, "This work is intended for civil practice, particularly in the surgical treatment of industrial accidents." The reviewer believes with the publishers that "This book should be read, re-read and meditated over by all surgeons." It is to be hoped that a good English translation will make an early appearance, although it is doubtful if the excellent style can be preserved.

H. G. W.

HEART AFFECTIONS. Their Recognition and Treatment. By S. Calvin Smith, M.D., Instructor in Medicine, University of Pennsylvania Graduate School of Medicine; Visiting Physician to the Philadelphia General Hospital, etc. Philadelphia: F. A. Davis Company, 1920.

A book on heart disease for the general practitioner that is at once elementary and up to date, practical and scientific, fills a definite need. The changes in our notions about heart disease within the last ten years have been so fundamental that few busy practitioners have been able to keep up with them. There are still many otherwise competent physicians who lump together all irregular pulses and who prescribe ten drops of the tincture of digitalis three times daily for a failing heart. For such men, S. Calvin Smith's book should be invaluable. It contains nothing new but there is no reason why it should. A brief consideration of the anatomy and physiology of the heart is followed by several careful chapters on the examination of the patient and a discussion of laboratory and graphic aids to diagnosis. The discussion of the interpretation of the electro-cardiogram, in particular, is a model of clarity and conciseness and will give the general reader information not readily accessible elsewhere.

The chapters on the non-medicinal therapy of heart disease are excellent; the one on heart drugs, especially digitalis, is somewhat inadequate. A. T.

A TEXTBOOK OF PHARMACOLOGY AND MEDICAL TREATMENT FOR NURSES. By J. M. Fortescue-Brickdale, M.A., M.D., Capt. R.A.M.C.; Physician to the Bristol Royal Infirmary and Clinical Lecturer in the University of Bristol. Oxford University Press, 35 W. 32d Street, New York, 1920. Price, \$10.00.

This book is divided into two parts; the first section is devoted to the pharmacology of the ordinary groups of drugs; the second section is an outline of the treatment of disease and the application of drugs and other therapeutic measures.

It is refreshing to find a textbook of this nature, which is based on modern pharmacological classification of drugs and other therapeutic measures and embodies a discussion of the physiological, chemical and physical factors involved, as well as a mere *materia medica*.

The second section gives a clear though brief description of the methods of treatment and the reason for their application which should be of great help in bringing about the intelligent co-operation of the nurse.

The paper and printing of this volume as well as the illustrations are to be particularly commended. W. B.

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE. By J. J. R. Macleod, M.B., Professor of Physiology in the University of Toronto, Toronto, Canada; Formerly Professor of Physiology in the Western Reserve University, Cleveland, Ohio. Assisted by Roy G. Pearce, A. C. Redfield and N. B. Taylor, and by others. Third Edition. With 243 illustrations, including 9 plates in colors. St. Louis: C. V. Mosby Company, 1920. Price, \$10.00.

The work is divided into ten sections—several of the chapters dealing with the circulation, the one on "Blood Pressure" being of special interest to the clinician. The section on "Chemistry of Respiration" includes recent work on the effect of oxygen deficiency on the respiratory center, and cites clinical applications. An excellent chapter on "Surgical Shock" correlates the physiological and clinical phenomena, while the section on the "Nervous System" incorporates an account of the fundamental principles of neuro-muscular physiology.

The work is a valuable reference volume, bringing up to date the advances in physiology and biochemistry and written in a very entertaining manner. Being the latest book of its kind it is sure to prove valuable to the advanced student in physiology and may be profitably consulted by the clinician. J. W. S.

DIAGNOSIS AND TREATMENT OF BRAIN INJURIES. With and Without a Fracture of the Skull. By William Sharpe, M.D., Professor of Neurologic Surgery, New York Polyclinic Medical School and Hospital; Consulting Neurologic Surgeon, Manhattan Eye and Ear Hospital, Hospital for Ruptured and Crippled, Beth Israel Hospital, New York City, etc. 232 illustrations. Philadelphia and London: J. B. Lippincott Company.

This is an exceptionally interesting one volume book giving primary consideration to the injuries of the brain rather than to the fractures of the skull which are of less importance. The pathology, diagnosis and treatment, together with detailed operative technic, are fully set forth. A very considerable space is given to the consideration of brain injuries in new-born babies and children.

A large number of individual cases are presented, with the procedure adopted and the results, both good and bad, attained in each case. The book is especially well illustrated with drawings, photographs, charts and skiagraphs. The general practitioner as well as the surgeon will find this a useful book. C. E. H.

CLINICAL MEDICINE FOR NURSES. By Paul H. Ringer, A.B., M.D., Member of Staff of the Asheville Mission Hospital, Asheville, N. C., and of Biltmore Hospital, Biltmore, N. C. Illustrated. Philadelphia: F. A. Davis Company, Publishers. English Depot, Stanley Phillips, London. Price, \$2.00 net. This is a small text-book on internal medicine.

Of the 280 pages at least 225 are devoted to the infectious diseases. Etiology, symptoms, course, prognosis and treatment of each disease are taken up in the ordinary text-book fashion. Four pages are devoted to the discussion of fever, eight to food and nutrition, and there are seven pages on the cir-

culatation, consisting chiefly of the anatomy and physiology of the heart and blood vessels.

There is nothing on the fundamental principles of medicine, which every nurse should know, such as the significance of pulse irregularities, causes of and methods to relieve vomiting, and so forth. In fact, this is a book of the nurse who wants to become a diagnostician.

P. T. B.

THE OXFORD MEDICINE. By various authors. Edited by Henry A. Christian, A.M., M.D., and Sir James Mackenzie, M.D., F.R.C.S. In six volumes. Illustrated. Volume 3, Diseases of the Digestive System, Kidneys and Ductless Glands. Oxford University Press, American Branch, 35 W. 32nd St., New York.

This volume is by far the best we have seen in this series. While the same academic and aloof tone is maintained, yet the material offered is so authoritative that the articles are helpful to those who seek basic facts on the regions treated. Dr. Reh-fuss' discussion of stomach troubles will prove a classic. Professor Rolleston's chapter on liver diseases while brief is basic and illuminating. We are glad to see Dr. Christian's article on essential vascular hypertension and to note that some of our leaders are getting away from the traditional conception that high blood pressure always means kidney disease. Riesman's chapter on the adrenals is particularly good. We could almost wish that one could purchase these monographs separately and not be compelled to lay in an entire system in order to have them at hand.

G. H. H.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

GLOVER'S CANCER SERUM.—The Toronto Academy of Medicine reports unfavorably on the cancer cure put out by J. Glover of Toronto, Canada. The report of the special committee appointed by the academy may be summed up by the paragraph which reads: "The data which your committee has been able to obtain have not convinced it that the results of treatment obtained by the use of Doctor Glover's Serum are better than those obtained by similar methods introduced by others and which have ultimately disappointed the hopes entertained of them." The committee reported that it was unable to obtain any evidence to substantiate the experimental claims of Doctor Glover, as he had refused to permit members of the committee to visit his laboratory. The committee also reported that it found no evidence for the clinical claims made by Doctor Glover (*Jour. A. M. A.*, February 5, 1921, p. 396).

SALICON.—This is sold by the K. A. Hughes Company, Boston, as "an improved aspirin." In a circular the claim was made, "We rendered aspirin absolutely harmless, and yet retained all its virtues as a medicine," "It positively will not depress the heart nor upset the stomach, no matter how large amounts of it are taken. . . . The Massachusetts state medical authorities . . . adopted its use at all the state camps for fighting the Spanish influenza. . . ." The first two claims are obviously false. As to the third statement, a letter written to the Commonwealth of Massachusetts brought the reply that the State Department of Health of Massachusetts does not endorse the use of Salicon for any pur-

pose. The A. M. A. Chemical Laboratory examined Salicon and reports that the product is sold in the form of tablets and that each consisted essentially of a mixture of 3.2 grains of acetylsalicylic acid (aspirin), 2.2 grains of magnesium carbonate and some starch (*Jour. A. M. A.*, February 5, 1921, p. 397).

THE WILLIAM F. KOCH CANCER REMEDY.—In 1918 William F. Koch graduated from the Detroit College of Medicine and Surgery. Less than a year after his graduation Doctor Koch declared that he had "developed a real specific cure for cancer." In the *Detroit Medical Journal* for July, 1919, there appeared a brief article by William F. Koch entitled "A New and Successful Treatment and Diagnosis of Cancer." A more extensive article was published in the *New York Medical Journal* of October 30, 1920. As a result of the publicity given the Koch treatment, the Wayne County (Detroit) Medical Society appointed a committee to investigate the matter. The committee reported that Doctor Koch had submitted no proof that his injections had any particular merit and concluded that the study was entirely experimental and improperly supervised. Evidently the most that can be said for this alleged cure for cancer is that the claims made for it have not been supported by independent investigators (*Jour. A. M. A.*, February 12, 1921, p. 466).

METOL DERMATITIS.—Workers in photographic establishments, especially those engaged in the developing process, are exposed to a number of industrial poisons. In an examination of forty studios in Chicago there were found thirty-one cases of poisoning by metol (the trade name for mono-methyl-paramido metacresol sulphate), characterized by an erythematous rash of the hands and arms, occasionally involving other parts of the body and giving rise to ulcers. Various methods for the prevention of this dermatitis and for its treatment are published (*Jour. A. M. A.*, February 19, 1921, p. 540).

IRON ARSENITE.—Ferric arsenite (iron arsenite) rendered water soluble by means of ammonium citrate is known as ferric arsenite soluble. The Council on Pharmacy and Chemistry in 1912 reported that the preparation was irrational and unscientific because "one cannot, in administering this drug, give a useful dose of iron without giving too much arsenic and, vice versa, one cannot give a safe dose of arsenic without giving too little iron" (*Jour. A. M. A.*, February 19, 1921, p. 540).

THE WILLIAM F. KOCH CANCER REMEDY.—A physician writes about a case treated by Doctor Koch and submits a letter written by Doctor Koch a week before the woman died of generalized carcinomatosis. The two letters bring out the optimism engendered in the husband of the poor cancer patient by the widely vaunted treatment of Koch. Herein lies the most pernicious feature connected with the exploitation of alleged cures for cancer, tuberculosis, etc. All of such remedies, whether fraudulent or merely worthless, produce a profound and temporary change in the patient's condition. It is this that tends to warp the judgment not only of the layman but also of the physician (*Jour. A. M. A.*, February 19, 1921, p. 537).

BOROTETRAMIN ("BORO") NOT ADMITTED TO N. N. R.—Borotetramin and Boro are names applied by the Takamine Laboratories to hexamethylenamin diborate. It is a molecular combination of hexamethylenamin and boric acid which is readily split into its components. The borates of hexamethylenamin have been known for some time, and the triborate has been used in medicine as "Borovertin."

Since Borotetramin must split into its components before it can act, it presents no distinct advantage over a simple mixture of hexamethylenamin and boric acid. For this reason the Council on Pharmacy and Chemistry reports that Borotetramin is a superfluous and, therefore, useless article and hence not eligible for inclusion in New and Nonofficial Remedies (*Jour. A. M. A.*, February 19, 1921, p. 538).

MEDICINAL USE OF WHISKY.—In the twenty-four states of the union in which permits for the prescribing of whisky may be issued, there are 112,238 practicing physicians. Of these only 33,379 (29 per cent.) have taken out permits. Evidently the remaining 71 per cent. do not regard whisky as of enough value in the practice of medicine to go to the trouble of taking out a permit (*Jour. A. M. A.*, February 19, 1921, p. 524).

SODIUM CACODYLATE, ARRHENOL AND MON-ARSONE.—At least three arsenicals not of the arsphenamine type have in recent years been the subject of some exploitation for use in the treatment of syphilis, namely, sodium cacodylate, Arrhenol (the sodium salt of methyle arsenic acid) and Mon-Arsone (the sodium salt of ethyl arsenic acid). As to the first two, it was shown several years ago that neither had any action on trypanosomiasis or spirochete infection. The inefficacy of sodium cacodylate in human syphilis has been demonstrated clinically. Animal experiments made in the United States Hygienic Laboratory have demonstrated that Mon-Arsone is devoid of any practical trypanocidal action. Whereas the "therapeutic ratio (the ratio of the minimal effective dose to the lethal dose) was 17 and that of neoarsphenamine 28, the therapeutic ratio of Mon-Arsone was found to be about 1, that is, it was effective therapeutically only in approximately fatal doses. The high arsenic content of a compound and a low toxicity and a number of cases of apparent clinical improvement does not indicate that a drug has real value in the treatment of syphilis. Many drugs cause temporary improvement in syphilis, but so far only those arsenicals related to arsphenamine have proved of real value and comparatively safe (*Jour. A. M. A.*, February 26, 1921, p. 595).

MORE MISBRANDED NOSTRUMS.—The following products were the subject of prosecution by the authorities charged with the enforcement of the Food and Drugs Act on the ground that the therapeutic claims made for them were false: Robinson's Alfalfa-Nutrient and Alfalfa Blossom (Alfalfa Chemical Company), the first claimed to be a new scientific discovery which would make thin people plump, the second claimed to be a treatment for women's ailments. Creole Female Tonic, Pa-Nol and Royalin Oil (Parker-Blake Company), the first represented as a cure for female diseases and other conditions, the second represented as a cure for indigestion, dyspepsia, kidney and bladder trouble and other conditions, the third represented as a cure for burns, colic, sore throat, sore eyes, sore mouth, piles, diphtheria and rheumatism. Hill's Specific or Aromatic Elixir (Hill Chemical Company), represented as a specific and cure for diarrhea of children, summer complaint, etc. Morley's Wonderful Eight (Morley Medicine Company), represented as a cure for colic, sore throat, lung disease, etc. Salvitae (American Apothecaries Company), represented as a cure for gout, rheumatism, etc. King's O. K. Capsules (Hance Brothers and White), recommended for gonorrhea, weakness, diseases of the bladder or kidneys, etc. Ring's Rose Injection (Charles L. Huisking), represented as a cure for gonorrhea, gleet, whites, etc. Prescription 500 Capsules (Grape Capsule Company), represented as a cure for gonorrhea, etc. (*Jour. A. M. A.*, February 26, 1921, p. 606).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., MAY, 1921.

NUMBER 5

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3529 Pine St., St. Louis, Mo.

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ORIGINAL ARTICLES

THE PUPIL AS A DIAGNOSTIC AID IN NEUROSYPHILIS*

EDWIN L. RUSSELL, M.D.

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The iris is a circular colored membrane placed behind the cornea. It has a perforation near its center, a little to its nasal side, the pupil, which serves to regulate the amount of light. It is attached at its circumference to the ciliary body and the ligamentum pectinatum iridis. It has two very important muscles: the sphincter pupillae and the dilator pupillae. The former encircles the pupil on its posterior border and is supplied by the third nerve and the latter's fibres are placed meridionally and are supplied by the sympathetic.

The ciliary body which begins at the ora serrata retinae contains the ciliary muscle, the muscle of accommodation. This has two sets of fibres, the longitudinal and the circular, which are so blended together that to differentiate them is very difficult. Those muscular fibres which are longitudinal make up what has been termed Bruecke's muscle and those fibres which are circular have been termed Mueller's muscle.

In order to understand the reaction of the pupil to stimuli it is very necessary to know the nerve supply of the iris and ciliary body. The contraction of the pupil is controlled by the oculomotor nerve which supplies the sphincter and ciliary body through the ciliary ganglion—a small ganglion about the size of a pinhead placed in the back portion of the orbit, external to the optic nerve. This ganglion has three sets of nerve fibres, the motor, the sensory, and the sympathetic. When the third nerve is stimulated, we have contraction of the pupil; by its destruction or section, we have dilatation. So we should understand that

pupillary contraction is governed by the oculomotor nerve.

The sympathetic system of nerves controls dilatation of the pupil. The fibres reaching the pupil come from the ciliospinal center, which is located we shall say in the cervical portion of the spinal cord. They pass through the Gasserian ganglion and reach the eye by way of the long ciliary nerves. Irritation of this center causes dilatation, and paralysis causes contraction of the pupil. The actions of the pupil are involuntary under ordinary conditions, but actors capable of displaying great emotion in their work have been studied in regard to their pupillary reactions at such times with the results that we have noticed decided changes. So therefore we say such actions are involuntary, with exceptions.

Anisocoria or inequality of the pupils in health. Formerly inequality of pupils was looked upon as pathological, but now we know differently. It may occur in eyes of different refractive mediae, the irradiation may not be the same in each eye, and the reaction to the closure of the lids may be unequal. The condition may be due to some functional disease of the stomach and intestinal tract in which instance it would be governed by the fibres of the sympathetic. The important differential diagnostic point is—Is the reaction to light stimulus equal in both eyes? If so, we may consider the case as one having no interesting pathology. It is present in various estimated percentages of healthy individuals—from 1 to 10 per cent. It is most common in myopes.

As to the size of the pupils in health, the average diameter is from 2.5 mm. to 4 or 5 mm., being larger in youth than in old age. The size should be considered in areas rather than in diameters as this is easier and much more practical. Haab has gotten out the most practical apparatus for measuring the size of the pupils. It consists of a number of circles varying one-half mm. in diameter, but no apparatus is necessary from a clinical standpoint.

The optic pathways have been variously

*Read before the Kansas City Eye, Ear, Nose and Throat Club, Kansas City, Mo., January, 1921.

drawn in our texts, and variously described as to their anatomy and physiology, but I think Fuch's version is the most universally accepted. The optic nerve is divided into three portions, the intra-ocular, orbital, and intracranial portions. It is very important that we keep in mind the arrangement of the fibres of the papillo-macular bundle which supply the retina from the macula-lutea to the papilla. They have the shape of a sector in their arrangement with the apex directed toward the center of the nerve with the base corresponding to the temporal side. Farther back this papillo-macular bundle lies in the center of the axis of the nerve. On cross section the sector occupied by the papillo-macular bundle amounts to one-third the area. This is large when we consider the area of the retina supplied by this bundle—the portion affected in central scotoma. The intracranial portion is about one centimeter in length, extending from the optic foramen to the chiasm; it is enveloped by the pia only.

We are all more or less familiar with the decussation of the fibres at the chiasm; it is important to remember that the fibres from the temporal side of the retina do not decussate while those from the nasal sides do, the non-decussating bundle containing about two-fifths of the fibres, and the decussating three-fifths. From the chiasm they continue as the right and left optic tracts, diverging, until they arrive at the primary optic subcortical centers. From here the fibres pass to various parts of the brain. Two of these tracts are of particular importance in our study of the pupillary reactions. The larger tract goes to the cortex of the occipital lobe which controls light perception and the fibres forming the smaller tract go to the oculomotor nucleus which controls the acts of pupillary changes, accommodation and convergence.

The fusion center is generally considered to be located in the occipital lobe. It is interesting in this connection to study the eyes of birds and dogs. Birds have no fusion center, as they do not have binocular vision, but to a certain extent dogs do, when looking with eyes straight ahead. The fibres of the optic tract which finally reach the cerebral cortex terminate in the cortical ganglion cells within a district which is known as the visual sphere, corresponding to that area surrounding the calcarine fissure. This fissure is on mesial or inner surface of the brain.

Now in order to understand the topic better, we shall mention the third, fourth, and sixth pair of cranial nerves, as they have much to do in the study of the clinical aspect of our cases. The third or motoroculi nerve supplies all the muscles of the eye except the superior oblique and external rectus as well as

the pupil and ciliary muscle. The superior rectus is supplied by the trochlear or fourth and the external rectus by the abducens or sixth. The nuclei of all three nerves lie upon the floor of the fourth ventricle. The oculomotor nerve seems to be composed of several partial nuclei at its origin. They all reach the orbit through the cavernous sinus, passing through the orbital fissure.

Physiological action of atropin, cocain, adrenalin and eserin. Atropin paralyzes the ciliary muscles by diffusion through the cornea into the aqueous. It causes the sphincter pupillae to dilate. In this we note the action of the third nerve. Cocain dilates the pupil by stimulation of the terminal fibres of the sympathetic in the eye. The actions of these two drugs are synergistic when placed in the eye at the same time and we get greater mydriasis. The manufacturers of adrenalin say that it stimulates the dilator muscle of the iris, contraction of which dilates the pupil. Eserin causes the sphincter to contract along with the ciliary body. In case of suspected lesion, if situated posterior to ciliary ganglion, eserin will continue to act. If in front of it, the effect of the drug will be lessened.

Ether anesthesia. In the stage of excitement the pupils are large and react to light, in the stage of safe anesthesia they are small and do not react to light. In the dangerous stage they are large and immobile which may be considered a dangerous sign. These reactions are all produced by the action of the drug on the sympathetic.

The study of the pupillary changes in alcoholism may be interesting. In the acute stage they are generally large. In chronic alcoholism we have the cases known as "wet brain" which is really another variety of leptomeningitis. The pupils in these cases are generally small. Among other diseases which do not particularly concern us in which pupillary changes occur are diabetes, lead poisoning, influenza, acute infectious diseases, botulism and diphtheria. In the latter we may have simply the dilatation of the pupil or we may also have paralysis of the ciliary muscle making what is known as internal ophthalmoplegia.

The pupil in glaucoma, iritis, traumatism, and morphinism should have special consideration as these cases are in a class to themselves and are easily recognized. In glaucoma we have dilatation of the pupil due to the increased pressure of the vitreous pushing the lens forward, causing paralysis of the ciliary nerves which accounts for the decreased reactions to the light reflex. The pupil very often assumes an oval form. In the later stages the optic nerve enters into the causes of reflex immobility.

In iritis or irido-cyclitis we have the contracted pupil with decreased light reactions, although these reactions are always present in a degree. Under atropin the pupil takes on various forms, owing to the degree of inflammation. It is well to consider the contracted pupil of morphin at this time—a contracted pupil, reacting to light, but without any of the inflammatory symptoms of iritis. In traumatism, as with a blow from a blunt instrument, without any external evidence of injury, we may have disturbance of circularity, size and shape of the pupil. The history is almost indispensable in making a diagnosis in this class of cases. Blood in the anterior chamber is almost diagnostic. If we have a laceration of the muscle mydriasis will become permanent; the vision may be somewhat impaired, but as a rule it is good. It is well to try the accommodation for recession of near point. It is interesting at this time to remember that we get reactions to light after iridectomy. In trauma the reactions may be impaired. We cannot speak positively with reference to the nerve action involved in these cases. Filaments from the oculomotor and sympathetic enter the iris, but whether the dilator muscle is acted upon only by the sympathetic is still uncertain. What impulses originate in the ciliary ganglion is an unsettled question.

Paralysis of the sympathetic as characterized by Horner's syndrome. This is demonstrated by failure of the pupil to dilate upon shading. We have a difference in the fullness of the vessels in two sides of the face. The face is redder and warmer on the affected side in recent cases; later the opposite is true, the paralyzed side being cooler and paler and no longer sweating. This is most frequently caused by tumors of the neck, especially thyroid enlargement.

Zentmayer quoting Lamb (Section on Ophthalmology, A. M. A., 1917) says that in disturbance of the internal secretions we have an oversensitization of the tissues due to hypersecretion of the thyroid; this appearing in the blood in the presence of epinephrin produces excitation of the sympathetic nerve endings causing an ocular syndrome consisting of dilated pupils, reacting to light and accommodation, eyeache, headache, chorioretinitis affecting the macular region. There may be ciliary congestion with lachrimation and dryness of the conjunctiva with a marked tendency to exophthalmos.

Meyer Weiner says (Section on Ophthalmology, A. M. A., 1915, page 39) in his paper on pupillary findings in cases of high blood pressure, that the pupil is found to be larger than normal with the usual minimum size of 4.5 mm. to 5.0 mm. in diameter, contracts

promptly to light stimulus, but immediately returns to the original size and there remains, without the light stimulus having been unchanged.

We shall now consider the appearance of the pupil in diseases of and injuries to the central nervous system. We have spoken of the changes in size, disturbances of circularity, etc., but now we shall in addition to these have to deal in particular with the reactions of the pupil to light. These are of three kinds, direct and indirect, or consensual, and associated. By direct we mean that the pupil reacts when light is directed through the pupil. In speaking of the consensual, we mean the reaction of the fellow eye when the other is irradiated, the fellow eye being observed while covered. The reactions should be equal in each eye in health. By associated reaction we mean the reaction caused by the actions of the oculomotor nerve as in convergence, when we have the sphincter, ciliary muscle and internal rectus acting together. The consensual reaction occurs in man more noticeably on account of the greater decussation of the nerve fibres.

To irradiate the pupil properly, rays of light should be thrown on the macula as this region contains the pupilla—motor fibres. The contraction does not occur instantaneously, but in the normal eye will begin in about one-half second, contracting to its smallest point in about one second. The patient should be instructed not to accommodate, and the examiner should have his eyes shaded.

Conversely, we may now speak of the immobility of the eye, of which we have three varieties, according to Roemer. We have the amaurotic immobility in one eye in which we have the dilated pupil. Upon irradiation of the blind eye we have no reaction, direct or indirect, but upon throwing the light rays into the other eye, we have both reactions present; that is, the pupil of both contracting at the same time. The above condition would occur in optic atrophy of one eye.

Absolute immobility occurs in an eye in which atropin has been instilled. We have no reaction to light, direct or indirect, nor to convergence, nor to sensory or psychical stimuli. We may have this internal ophthalmoplegia in syphilis and often do, although we must not forget that in the first of this paper we spoke of the dilated pupil in toxemias and poisoning, diphtheria, etc.

A lesion that will cause absolute immobility, and I shall still have to quote Roemer, may have seven different seats according to its location: (1) the sphincter, (2) short ciliary nerves, (3) ciliary ganglion, (4) motor roots of the ganglion, (5) trunk of the third nerve, (6) ganglion cells of the nucleus of the sphinc-

ter and (7) brain cortex. I am very sorry he does not see fit to give us examples in each case.

Reflex immobility. This is the Argyll-Robertson pupil so typical of tabes, and in consideration of your feelings, for I have often seen bored expressions on members of this society when this renowned Scot's name was mentioned, and dispose of this reaction by reminding you that the fibres of the optic nerve that have to do with light perception have been explained previously in this paper as those going to the cortex of the occipital lobe, and those having to do with pupillary reactions, accommodation, and convergence, going to the oculomotor nucleus. Therefore the lesion is in the latter fibres—those going to the oculomotor nucleus. This reflex immobility may occur in progressive paralysis, brain tumors, head injuries, and spinal cord injuries. In head injuries we shall generally find mydriasis on same side as injury and also in those cases showing miosis it is the smaller of the two pupils generally found on the wounded side. This is considered as showing vasomotor trouble, constriction or dilatation, possibly bilateral, predominating on the side of the wounded sphere. Typical spinal miosis may be caused by dislocation of the fourth cervical vertebra according to case report by Mandot.

From a clinical standpoint we shall have to be content for the present in confining ourselves to the consideration of those diseases which are known to cause pupillary disturbances and to the different variety of lesions. If we attempt to locate the lesion by the pupillary changes alone we are hopelessly lost for we are inclined to look upon many of the brilliant diagnoses in neurology as mainly conjecture. Syphilis, progressive paralysis and tabes are the three diseases which cause distinct pupillary changes, and the latter two, especially the latter one, is nearly always caused by syphilis.

Varieties of lesions. They may consist of primary affections in the nerve at origin or periphery, inflammatory, or degenerative; or the lesion may be due indirectly to inflammation of the surrounding tissue, such as exudates, hemorrhages, thickenings, neoplasms, etc.

In order to arrive at a conclusion in this matter we should have to go thoroughly into the question of disturbances of motility of the eye which would help us some. We have lesions above the nuclei which never cause paralysis of one muscle alone. Nuclear lesions produce paralysis of several muscles. We seldom have involvement of the muscles of accommodation, but generally an ophthalmoplegia externa. In chronic ophthalmoplegia we have an atrophy of the gray sub-

stance. Syphilis is the most frequent cause of this and also of ophthalmoplegia interna.

In lesions at the base of the brain, or basal paralysis, we may have paralysis of second, third, fifth, sixth and eighth nerves—one or both sides. Fracture at base of skull is a most frequent cause. Orbital lesions may be elicited by pressure which causes pain, or may be diagnosed by the presence of tumor in the orbit.

Collins (*American Journal of Medical Science*, Vol. 155, Jan. to June, 1918) says that syphilis writes its signature upon the individual whose nervous system has been invaded by the spirochaeta pallida by disordering the size, shape and contour of the pupils. He says that in 395 cases of tabes and general paresis 335 had disordered pupils. From tables quoted by him I give the following: tabes 270 cases, disordered pupils in 248 cases; general paresis 125 cases, disorder of size, shape and contour of pupils 87; cerebrospinal syphilis 251 cases, pupils disturbed in 22 cases. He also in this table gives the nerve involvement in each case.

In a suspected case of neurosyphilis with ocular manifestations, the first thing to do is to have a Wassermann test made. This should be made by at least two different antigens, say alcoholic and cholesterin. A Wassermann should be made of the spinal fluid if the blood is negative; a cell count should be made and the presence or absence of globulin established. A pleocytosis of seven or over is pathological. The presence of globulin alone in the spinal fluid in an early case of syphilis without neurologic signs is indicative of the presence of spirochaeta pallida. (The above is quoted from an article by Scott and Pearson in the *American Journal of Syphilis*, April, 1920.)

We must not let ourselves be deceived in such cases with positive findings of syphilis in which we have also the presence of another disease. Dr. A. Knapp (*Archives of Ophthalmology*, January, 1918) mentions such a case in which a postmortem revealed a large epithelioma in the frontal lobe. Schoenberg in the *Archives of Ophthalmology*, March, 1920, cites a case of tobacco and alcoholic amblyopia with positive Wassermann which resisted anti-syphilitic treatment, but obtained good vision when placed on treatment for the amblyopia. The writer had a case similar to the latter a few years ago in which results were almost spectacular.

We have mentioned the seat of lesions before in this paper, but under the head of syphilis I should like to mention it again, quoting Collins in the *American Journal of Medical Science*, Vol. 155, January to June, 1918. He says "the essential lesion of cerebrospinal syphilis is lymphocytic infiltration of

the pia usually associated with a circumvascular, round-celled infiltration of the parenchyma immediately beneath it. In certain cases this process progresses to such an extent as to give rise to symptoms that justify the diagnosis of meningitis—basilar, cortical or spinal." He further says that ocular paralysis associated with symptoms which justify the diagnosis of meningitis, coming on suddenly, yield to treatment. Those due to nuclear lesions which develop insidiously are rebellious to treatment. Some of these that are nuclear at the end of life were once radicular.

Prognosis.—Much can be accomplished in the treatment of neurosyphilis if the case is diagnosed early. We do not treat these cases soon enough, for often the ocular manifestations are not noticed until late. It has been estimated that 20 to 25 per cent. of all cases of syphilis have nervous manifestations in the early secondary stage of the disease. This would mean intraspinal medication six weeks to three months after the initial infection. This is in my opinion the only way ever to get good and satisfactory results in neurosyphilis. I should like to ask a question: Did you ever see a case of primary optic atrophy improve with or without antisyphilitic treatment? Did you ever see the pupil become normal in tabetic cases? I never did.

Treatment.—The treatment may be divided into intravenous with mercury injections, intraspinal and intracranial. Iodides may be given by the mouth. I have never seen optic neuritis develop from the use of salvarsan. If mercury injections are given along with salvarsan it will prevent this condition. This has been written on under the name of "neuro-recidive." Fuchs mentions it briefly as also does Schoenberg, quoted previously in this paper. Salvarsan should not be given in vascular syphilis, as shown by hemorrhage retinitis, or at least not until after a preliminary course of mercury.

Summary.—The writer is free to admit his disappointment, since beginning this paper, in our inability to locate the lesion more definitely in syphilis of the nervous system by the pupillary findings, but these are of great assistance added to our other symptoms, especially if we take up thoroughly the disturbances in motility, that is the muscular pareses, the study of which should be a very interesting topic for another paper.

402 Argyle Bldg.

REMOVAL OF GALLBLADDER WITHOUT DRAINAGE.—A. Murat Willis, Richmond, Va. (*Journal A. M. A.*, March 12, 1921), emphasizes again that the omission of drainage after the majority of the operations of cholecystectomy is a procedure that is perfectly safe, and that the results obtained by such omission are distinctly superior to those following the older method of packing or draining with gauze.

TWO CASES OF PELLAGRA OR ACRODYNIA IN CHILDREN

JOHN ZAHORSKY, M.D.

ST. LOUIS

I am not at all sure that the clinical features of pellagra in children are so clearly defined that a diagnosis can be easily made. Reference is made to two articles.^{1,2}

At the last meeting of the American Medical Association, Weston has thrown more confusion into the subject by reporting a similar case under the term acrodynia. These cases are added to help elucidate the subject. Recently two other similar cases were encountered; a report of these will be made later. Comment on the clinical features here encountered is superfluous at present.

CASE 1. M. S., age two and one-half years, was first seen May 9, 1916. The present trouble came on slowly three months ago with a "cold," followed by an irregular fever. Previously he had been a healthy boy. He was fed on a general diet and received no corn meal. Little or no fever has been noticed lately. He is growing progressively weaker. During the last month lies quiet and will not play; seems very miserable. His sleep is very restless. Always very constipated; no diarrhea during the course of the illness was noticed. The patient has been seen by several physicians and many diagnoses have been made.

Examination.—Thin boy, weight 27 pounds. The skin is generally dusky and sallow, almost cyanotic when he cries. Hair on the head is thin and falling out. Some erythematous patches are found on the forearms, but the hands and feet show the principal skin lesions. The fingers and toes are swollen and covered with scales. The whole hands have a swollen, purplish appearance; the face looks bloated; no skin lesions on the trunk or in anal region were present then but the mother stated that there had been some breaking out on various parts of the body.

The mucous membrane of the mouth is very much congested, the gums look spongy, and the three lower incisors are very loose in their sockets. He had lost one incisor a week ago; it fell out. Another tooth came out while the examination was going on. It seemed a perfectly healthy tooth, not showing the least decay. The canines also were very loose and seemed ready to drop out. No ulceration could be made out in the mouth. Salivation was excessive; throat slightly congested. The boy feels weak and tired; the hands and feet are cold. He can sit up and even walk. Plantar reflex diminished, patellar very active, no Chvostek. Temperature 99.6. Urine examination, negative. The blood shows a slight leucocytosis, 14,000. Wassermann test, one plus. No Von Pirquet test was made. Heart, lungs and abdomen showed nothing abnormal.

The condition of the boy remained about the same for two months; meanwhile he lost three more teeth, some more hair and the fingers and toes continued congested and desquamated. A paronychia gradually developed. The root of the nails, especially of both thumbs, appeared congested. The roots of the thumb nails had a yellowish color and were very much thickened. The thumb was not very tender to the touch.

1. Snyder, *Amer. Jour. Dis. Children*, 1912, p. 172.
2. Weston, *ibid*, 1914, p. 124.

In August, 1916, he developed a mild attack of bronchopneumonia. After this his appetite improved and he commenced to get stronger. Weight 25 pounds on August 16.

In December, 1918, he weighed 24½ pounds. Had lost a bicuspid tooth; paronychia still present. Plays more and seems more active. The congestion of his hands is much less marked.

During the winter he had several colds but by March, 1917, he had gained in weight and weighed 28 pounds. Thumbs seem nearly normal; four teeth gone; two teeth still loose in their sockets.

In May he had another attack of bronchitis. In June he showed more vigor, good color, good appetite, but two teeth were still movable from side to side. In August he weighed 29 pounds; teeth tightening up. In February, 1918, another attack of bronchopneumonia. He became a big, strong boy.

CASE 2. J. C., boy, was first seen November 23, 1916, when he was seven months old. He was the second child in the family. Nothing in the family history could be elicited that threw any light on his disease. Father and mother healthy young people; no miscarriages; birth normal. He was breast fed until three weeks ago and seemed to thrive. He has always been subject to colicky spells and occasional green stool. Weight at present 18 pounds. A few weeks ago the mother noticed an increased fretfulness, which was attributed to indigestion and tablets of the Bulgarian bacillus were prescribed by the family physician. An erythematous eruption appeared about three weeks before. This persisted for several days but gradually faded on the trunk, while some persisted on the extremities. The stools became very green and the buttocks irritated. He was taken off the breast and put on barley water with cow's milk gradually added. Now takes five ounces of a mixture of equal parts of barley water and milk with dextrinulose. Stools are constipated but he passes much flatus. He is exceedingly unhappy, "whines all day and fusses at night." He cannot sit up.

Examination.—A plump, well-nourished boy. The skin is sallow or dusky in appearance. The baby is listless, and takes little interest in anything, but frets on being handled. All muscular movements are made with sluggishness and weakness. Superficial and deep reflexes normal. No paralysis anywhere; seems very unhappy. The hands show a significant peculiarity; they are somewhat swollen and dusky red in appearance. This redness involves the fingers, palm and dorsum. Two scaly patches are found between the fingers. The skin around the anus is inflamed and a number of small papules are scattered over this area. The mucous membrane of the mouth is reddened but no ulceration is present; no teeth. Salivation is very profuse; the throat shows a slight congestion; tonsils small. The heart and lungs show nothing abnormal on physical examination. The abdomen is not distended; no peristaltic waves are visible. The liver seems somewhat swollen; spleen not palpable. There is no general glandular enlargement. Rachitic signs absent; no Chvostek; no muscular rigidity. Temperature, 100.2. Pulse rapid, 140.

Further examinations were made on the following days. Von Pirquet reaction negative. Wassermann test negative. Urine examination revealed no nephritis nor urinary infection.

Blood Examination.—Leucocytes, 29,000; polym., 62; lymphocytes, 24; large mono., 4. Prescribed Keller's malt soup.

December 13, 1916. No improvement. Drools very much. Weight, 18 pounds, 4 ounces. Cut two teeth. Stools dry, constipated. Anal skin the same. Temperature 99.8. Prescription, Gray powder.

December 18. Feels miserable. Several attacks of vomiting. Four to six stools daily; severe attacks of

colic. Tissues very flabby; joints relaxed. Does not sit up. Hands the same; ulceration of one finger. Tachycardia (168). Anal skin worse. Salivation profuse; gums very much swollen. Ulceration over upper central incisors which are coming through. Weight, 17 pounds, 8 ounces. Prescription, K I, 2 grains t. i. d. Food, two-thirds cow's milk, one-third barley water, honey.

Dec. 20. Weight, 17 pounds, 15 ounces. Condition the same. Slight photophobia.

January 29, 1917. Between December 25 and January 15, the patient passed through a severe attack of croupous pneumonia. The inflammation began in the lower lobe of the left lung and passed through every part of both lungs—migratory pneumonia. Fortunately a consolidated lobe cleared before the next became consolidated. Was very sick with almost continuous high fever, 103 to 105 degrees. Several times his death seemed imminent. Yet a final crisis arrived and he seems well now; lungs clear on physical examination, weight, 15 pounds, 10 ounces. During the pneumonia the gingivitis became general and very severe; the two lower incisors became loosened. The mouth is much better now but the incisors are still movable. Ulcer appeared over coccyx which is still present. Ulceration of finger and erosion of skin around the rectum still present; papules gone. Very pale, but looks bright. Prescription, Iodid of iron.

February 25, 1917. Ulcer over coccyx about well. Fingers clean but still somewhat reddened. Gums very much improved. Erosion around rectum still better. Lower incisors still loose. Coughs several times a day. Weight, 15 pounds, 12 ounces. Still shows some photophobia.

March 12. Has been doing very well and gaining in weight; is fed a general diet now. Last three days the appetite has failed and fever has developed. Very fretful but not greatly prostrated; coughing. Temperature 103.2. The buttocks are irritated. Abdomen very much distended. A consolidated area of pneumonia is found in the base of the left lung. Prescription, Camphor.

March 22. Fever persisted for five days then dropped by crisis. He has less cough. Lung cleared up. No appetite. Weight 15 pounds, 2 ounces.

May 15. Much better; plays and takes an interest in others. Weight, 19 pounds. Still suffers from indigestion.

June 6. Big, fat boy. Stools regular but belches and has gurgling in the abdomen. Cries out at night. Head large; slightly pale. Six teeth. The loose lower incisors have tightened. He cannot stand alone. All skin lesions disappeared. Hands are not congested.

Since the last notation, the boy has continued to grow. He had another attack of pneumonia in the winter of 1918 and another in 1919. Tonsils and adenoids were removed in 1919 because he had great difficulty in breathing and a recurrent sore throat. He has shown a marked predisposition to respiratory infections since 1917.

Since the above was written an extensive study of these cases by Beifeld³ has appeared, which adds to the proof that this disease is a definite clinical entity of undetermined nature.

536 N. Taylor Ave.

3. American Journal of Children's Diseases.

PNEUMOPERITONEUM

L. R. SANTE, M.D.

ST. LOUIS

The injection of a gas into the peritoneal cavity for the purpose of aiding in the roentgen-ray examination of the intraabdominal organs was practiced for the first time in 1912 by Lorey¹ who injected some air into the peritoneal cavity through the canula from which ascitic fluid had been removed in a case of cirrhosis of the liver. He was able to visualize the liver and spleen but did not follow up his experiment with any extensive study. His work was followed in quick succession however by a number of investigations by other men. In 1918 appeared the first paper outlining any extensive work with the method. This was by Goetze² who described its use with all manner of positions. To Stewart and Stein³ of New York however belongs the credit for the first introduction of the method into this country as an aid to roentgen-ray examination. For the construction of a special table to simplify pneumoperitoneum technique and abundant clinical studies with the method Dr. Orndoff⁴ of Chicago must receive due consideration.

Within a short time after the presentation of these introductory articles, the method was taken up and practiced by many men throughout the country. Our own experience with pneumoperitoneum has dated from December, 1919. At first we followed very closely the technique recommended by Drs. Stewart and Stein, as to preparation and injection, and used oxygen from an oxygen tank for inflation, a manometer being used to determine the amount of intraabdominal pressure. We have been continually modifying our technique however until at present our procedure is as follows: the patient is given an ounce and a half of castor oil the evening before and a soap-suds enema the next morning until it returns clear. Little if any breakfast is allowed and the patient is catheterized or caused to void immediately before the examination is undertaken. With this preliminary preparation the patient is ready for inflation. The left lower quadrant of the abdomen is chosen for the injection since there is less liability of damaging solid organs or likewise the large bowel since at this location it is more posteriorly located and there is no possibility of adhesions from an inflamed appendix.

The apparatus which we have found most satisfactory (Fig. 1) consists of an ordinary lumbar puncture needle and pump from a Potain aspirator with tubing and suitable connectors, with the bulb from a Murphy drip apparatus interposed (vent hole plugged) as a trap to prevent the accidental introduction of foreign material from the pump. The entire apparatus is sterilized except the pump. No effort is made to wash or sterilize the air. After thoroughly cleansing the abdomen and painting with iodine, the needle is inserted (directed slightly upward and inward) in the lower left quadrant of the abdomen. A definite resistance can be felt giving way before

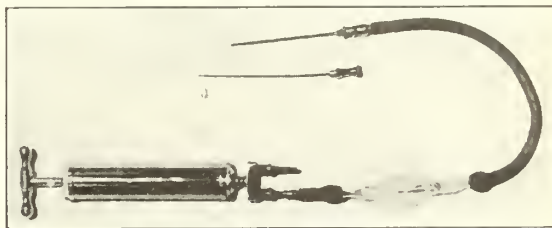


Fig. 1.—Apparatus for producing pneumoperitoneum. Lumbar puncture needle connected by suitable tubing and connectors to a Potain aspirator pump with Murphy drip (vent hole plugged) interposed.

the needle as it passes through the fascia and peritoneum. For determining definitely when the needle is in the peritoneal cavity we have found the stethoscope most helpful. The stethoscope applied at some remote part of the abdomen elicits the sound of the rushing air at each stroke of the pump which is not obtained when the needle is still in the subcutaneous tissues or beneath the fascia. We use as a criterion of proper distention the slight rounding of the abdomen and the definite separation of the anterior abdominal wall from the underlying mass to be examined. This state is determined by examining the patient while lying upon his back viewed before a vertical fluoroscope. When proper distention is accomplished the needle is withdrawn and the examination proceeded with.

The air being lighter than the intraabdominal organs, rises to the top and displaces or envelopes them, thereby throwing them out into relief by reason of the varying radiographic density produced. Since the air, which makes the organs visible, rises to the top, it is obviously necessary to place the patient in all manner of positions to secure the desired information concerning all of the abdominal organs.

The patient is examined upon the back and on the abdomen; rolled well over upon the right side and then upon the left, with the head elevated and then lowered; with the tube under the table and then over.

1. Lorey: Demonstration einiger seltener Roentgenbefunde. Verhandl. d. deutsch. Roentgen-gesellschaft., 8:52, 1912.

2. Goetze, O.: Die Roentgendiagnostik bei gasgefüllter Bauchhöhle; eine neue methode. Munch. Med. Wachen., 1918, LXV, 1275-80.

3. Stewart, Wm. H., and Arthur Stein: Am. J. of Roent., Vol. VI, No. 11, 1919, pp. 533-41.

4. Orndoff, B. H.: Pneumoperitoneum in X-ray Diagnosis. J. Roent., Vol. 2, No. 3, 1919.



Fig. 2.—Normal antero-posterior relation of abdominal organs, except for left kidney which is lower than normal.

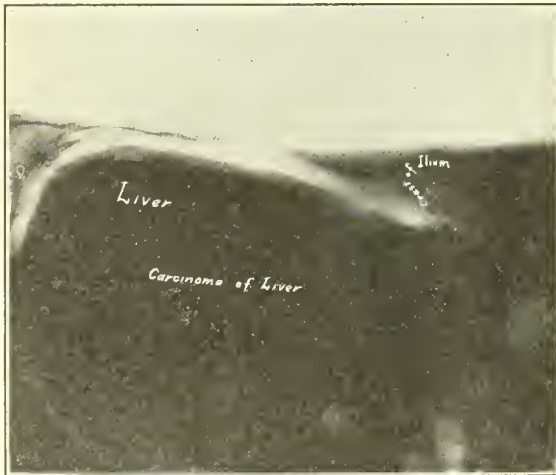


Fig. 3.—Carcinoma of the liver showing the irregular lobulations on the liver.

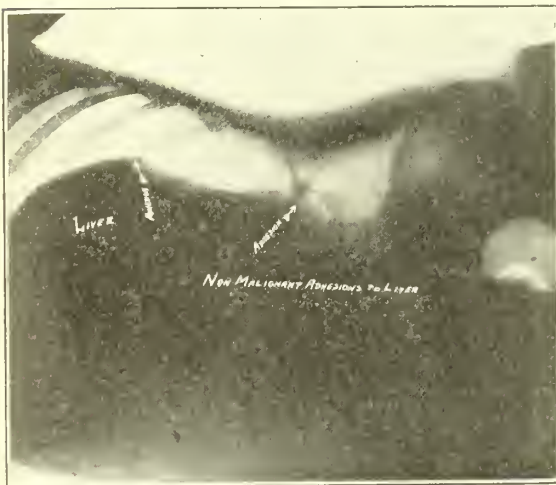


Fig. 4.—Nonmalignant adhesions between the liver and lateral abdominal wall.

We have found this method of great advantage in the six following groups of cases:

1. Those cases in which information is desired concerning the presence, position, size, form and mobility of the intraabdominal organs.

The actual presence or absence of a kidney for instance, or the malposition of a very movable one, the position of a displaced spleen; small nodules, too small to make definite palpable masses studding the surface of the liver, but none the less definite indication of carcinomatous involvement; all these are examples of conditions falling under the first group.

2. Where there are masses of undetermined origin; to determine from whence they spring and to what they are attached. By utilization of the retroperitoneal position the retroperitoneal character of masses may be determined. Tumor masses of the stomach and large bowel can be visualized, but up to the present time this method has not proved practical for the examination of the gastrointestinal tract.

3. Where there is kidney or ureter involvement and where other methods of examination fail to yield the desired information. A shadow suspicious of a kidney stone can be definitely localized to the kidney shadow. Where there is involvement of the ureter or kidney pelvis, such as stricture, kink or obstruction, opaque injecting material can be visualized during its injection and the lesion studied to better advantage.

4. Where there is gall-bladder involvement or pericystic adhesions. In the actual detection of gall-stones I do not feel that this method will give much advantage over other methods, but in the detection of pathological gall-bladders and pericystic adhesions I am of the opinion that with slight improvement in technique a very large percentage of gall-bladder disease will be detected.

5. Where adhesions are present either post-operative or as the result of a pathological process. In this group pneumoperitoneum is of all methods the most successful.

6. In cases of subdiaphragmatic involvement where there is a question of subdiaphragmatic abscess, diaphragmatic hernia, etc., it would seem that this method would be of great aid. The air, rising to the highest point, normally separates the liver from the diaphragm and shows a clear space between. Any collection of fluid in this area could be seen very clearly.

This grouping is of course very arbitrary and is subject to much overlapping. A definite, palpable mass, for instance, may turn out to be a movable kidney, or fecal impaction

in the colon, or a pathological gall-bladder may be adherent to the anterior abdominal wall. It serves however to show the usefulness of the procedure.

A few cases illustrating the value of this method are shown. Fig. 2 shows the appearance of the intraabdominal organs in the anteroposterior view. Note the smooth outline of the liver and its separation from the diaphragm; the slightly enlarged spleen and the abnormal position of the kidneys, the left be-

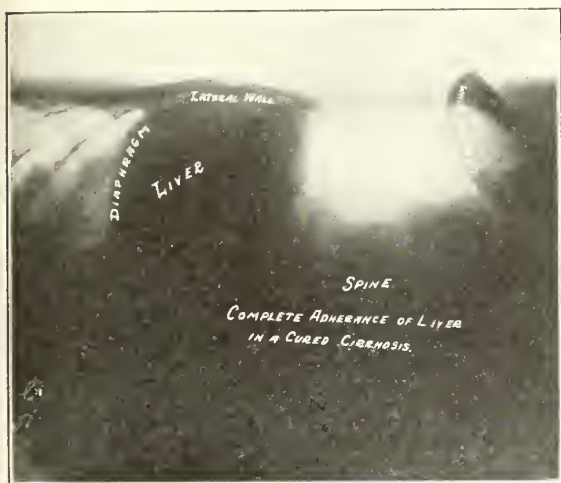


Fig. 5.—Complete adherence of liver in a case of cured cirrhosis.

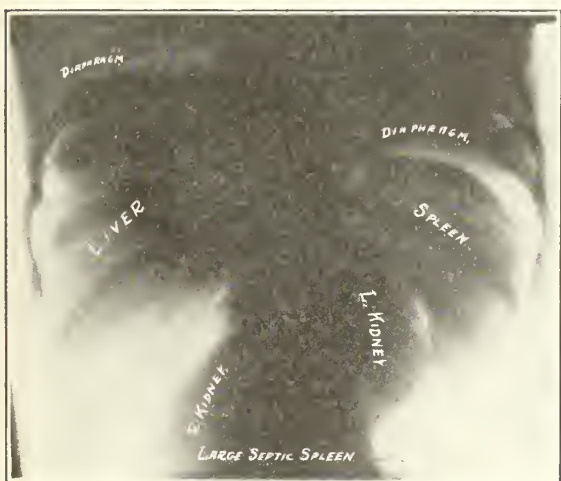


Fig. 6.—Large septic spleen. Right kidney slightly lower than normal.

ing considerably lower than the right. Changes in the outline of any of the organs can be easily detected. Fig. 3 shows an irregular lobulated appearance of the liver margin as seen in carcinoma of the liver. In four cases of carcinoma of the liver which we have examined, two have been of this irregular type and two have had very definite round nodules studding the liver margin. Two cases of cir-

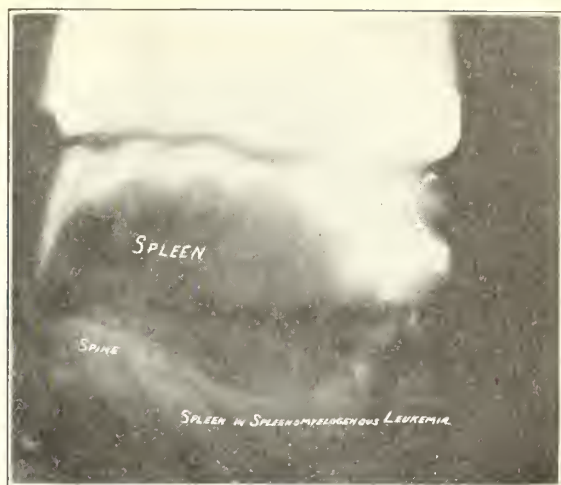


Fig. 7.—Very much enlarged spleen in a case of splenomyelogenous leukemia.

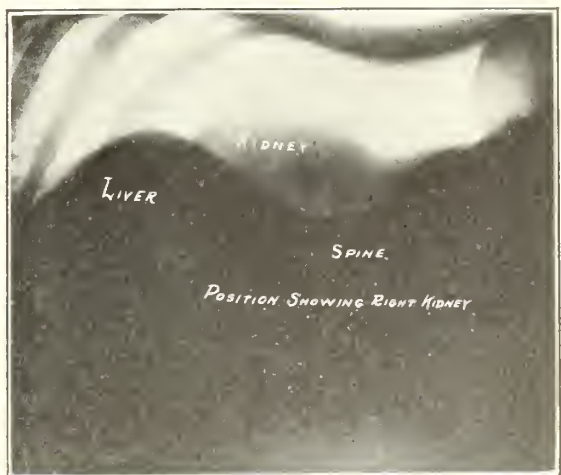


Fig. 8.—Right lateral position often necessary for a good view of the right kidney.

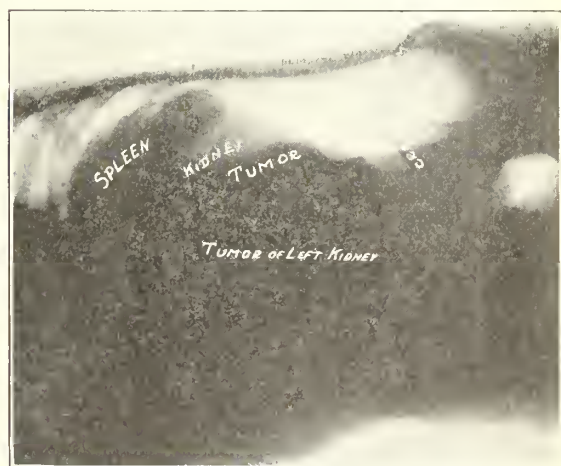


Fig. 9.—Tumor of left kidney.

rhosis of the liver gave the same appearance so that an absolute differential diagnosis is impossible. Adhesions may or may not be present in either form, there being nothing distinctive about their character or location. Fig. 4 shows non-malignant adhesions between the liver and lateral abdominal wall. Fig. 5 shows a complete adherence of the liver to the abdominal wall and diaphragm, nature's successful effort to cure a cirrhosis of the liver occurring more than ten years previously, and requiring at that time nine tappings for the removal of ascitic fluid.

Fig. 6 shows a very much enlarged spleen associated with a septic infection. Fig. 7 shows a still larger spleen in a case of spleenomyelogenous leukemia after it had been considerably reduced in size by roentgen-ray treatments. Fig. 8 illustrates the right lat-

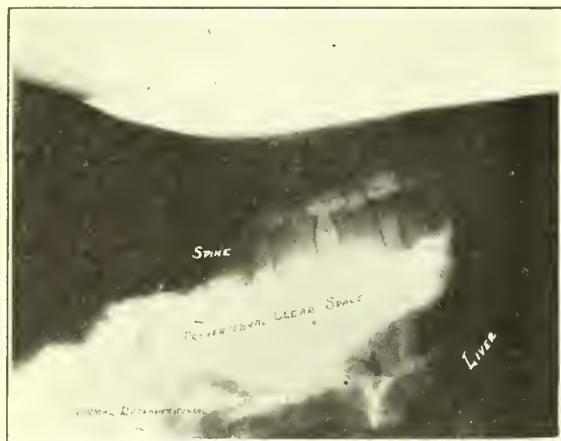


Fig. 10.—Normal structures as seen in retroperitoneal position.

eral position often necessary to show the right kidney. The patient is rolled well over upon his side until the right lobe of the liver is tilted almost over to the midline, thus uncovering the kidney and rendering it clearly visible. In this position opaque media can often be followed during its injection into the kidney pelvis and strictures, kinks or obstructions be directly visualized. Marked relative variation in size of the two kidneys has not been noted. Unless other coexisting pathological conditions obstruct the view, tumor masses of the kidney should be clearly visible. Fig. 9 shows a large tumor of the left kidney, occupying the entire left side of the abdomen and clinically resembling very much a large spleen.

The definite retroperitoneal character of a mass can be definitely determined by placing the patient in the retroperitoneal position. This position, which was described in detail in a previous communication,⁵ consists of plac-

ing the patient prone, thighs and chest supported on two blocks, with the abdominal wall sagging freely between. All pressure is thus taken off of the anterior abdominal wall and the intestines and all abdominal organs with mesenteric attachment fall forward leaving the retroperitoneal structures plainly visible and creating a clear prevertebral space. Exposing from side to side a picture similar to that shown in Fig. 10 is obtained in which any involvement of the retroperitoneal space can be clearly seen.

In pneumoperitoneum as in all other new methods of examination, many things are encountered which require serious thought and consideration for a correct interpretation. Repeated examinations are necessary in order to become familiar with the normal so that normal anatomical structures may not be mistaken for pathology. A large number of examinations by many men over an extended period of time will be necessary before the full value of the method can be appreciated.

515 Lake Ave., Webster Groves.

DRAINING THE GALL-BLADDER BY INSTILLING MAGNESIUM SULPHATE INTO THE DUODENUM*

F. NEUHOFF, M.D.

ST. LOUIS

I wish to put on record my findings in several cases, studied by aid of the Lyon method of injecting magnesium sulphate into the duodenum through the duodenal tube. I selected the cases for this report from my records with the view of illustrating some important points in the application of a procedure, the value of which to the general practitioner is as yet undetermined. Possibly the points observed by me have previously been brought out by other writers. In that case I will be content to have my testimony considered as corroborative.

My technic was copied from B. B. V. Lyon and G. E. Brown, omitting details which seemed unessential or impracticable on account of the circumstances under which I worked. All patients were examined in a fasting state. Their teeth were brushed and their mouths and throats cleansed with a 1 to 1,000 solution of permanganate of potassium. A sterilized Rehffuss tube was passed into the stomach. Suction was made and any gastric contents withdrawn from the stomach set aside for examination. The stomach was washed with distilled water until apparently clean. The patient was then given 8 ounces of dis-

5. Sante, L. R.: The Detection of Retroperitoneal Masses by the Aid of Pneumoperitoneum. *Am. Jour. of Roentgen.*, Vol. VIII, No. 3, 1921, pp. 129-134.

*Read at the Clinical Conference of St. Mary's Infirmary, St. Louis, April 20, 1921.

tilled water to drink. If bedridden he was turned on the right side, thighs flexed. An ambulatory patient was allowed to sit up or walk about. The tube was permitted to find its way into the duodenum by its own initiative, being neither pushed in nor held back. We determined when the tube had reached the duodenum in ambulatory cases by the use of the fluoroscope. In bedridden cases, we would from time to time make suction with a syringe attached to the tube. While the tube remains in the stomach, suction brings water or air. When the tube reaches the duodenum, suction brings either duodenal contents, perhaps bile tinged, or else you feel a marked resistance on pulling back the piston. When we knew the tube to be in the duodenum we instilled 50 c.c. of a 25 per cent. warm sterile magnesium sulphate solution, followed by the injection of air. If in 10 minutes nothing flowed from the tube spontaneously, the flow was started by aspiration. The bile obtained is considered gall-bladder bile. In normal cases it is yellowish brown, smoky looking, syrupy, of about 1030 sp. gr., and contains some mucus, but is fairly clear. In infected gall-bladders, this bile is much thicker, dark brown or black, sometimes dark green, turbid, sticky and contains much mucus. Microscopically it contains many more leucocytes, epithelial cells and bacteria than normal bile. Cholesterol crystals point to probable gall stones, though by no means invariably. In course of time, the bile flowing from the tube becomes a light yellow, is thinner and of a sp. gr. of about 1010. This is presumed to be liver bile coming after the gall-bladder has been emptied.

I shall give the details of four cases examined after cholecystectomy.

CASE 1.—W., aged 42, male. Had his gall-bladder removed by Dr. L. Rassiur on February 17 for chronic cholecystitis. Appendix had been previously removed. Duodenal examination was made March 4. Before magnesium sulphate instillation no bile was obtained. Ten minutes after the instillation, there started spontaneously to flow from the tube 160 c.c. clear light yellow, inclined slightly to greenish, neutral bile, sp. gr. 1008, containing very few epithelial cells, few leucocytes and no bacteria. Bile also drained from the wound, which it had not done previously. Contrast this with an examination made ten days before cholecystectomy. At that time there came, before magnesium sulphate was used, 13 c.c. acid, yellow, turbid bile, containing many leucocytes, diplo- and streptococci. After the magnesium sulphate, there came 35 c.c. acid bile, turbid, dark green, viscid, sp. gr. 1037. After that, there came 55 c.c. of bile of greenish color, acid, less turbid, sp. gr. 1015, containing few cocci and leucocytes.

CASE 2.—S., aged 46, female. Her gall-bladder had been removed by Dr. Rassiur for chronic cholecystitis. Duodenal examination five weeks later. Before using magnesium sulphate, we aspirated 2 c.c. clear, yellow, neutral bile containing few epithelial cells, few leucocytes, no bacteria. After the mag-

nesium sulphate, we obtained 75 c.c. clear, yellow, non-viscid, neutral bile, containing little mucus, no leucocytes or bacteria.

CASE 3.—F., aged 65, female. Cholecystectomy for phlegmon, done by Dr. Rassiur. Examination by duodenal tube 17 days later. Bile before magnesium sulphate instillation was 50 c.c. in amount, neutral, clear, light yellow, sp. gr. 1008, containing traces of mucus, few epithelial cells, few leucocytes, no bacteria. After magnesium sulphate, there came 135 c.c. of clear, light yellow, alkaline bile, containing no mucus, few epithelial cells, few leucocytes and no bacteria, sp. gr. 1010. Wound which had not drained bile before now did so.

CASE 4.—K., aged 47, male. Had his gall-bladder removed by Dr. Jno. McH. Dean for chronic cholecystitis. Duodenal examination 19 days later. Wound still draining a little bile. Before the use of magnesium sulphate we obtained 5 c.c. clear, light yellow, neutral bile. After magnesium sulphate, came 75 c.c. of bile of the same color as the preceding, alkaline, clear, sp. gr. 1023, containing little mucus, no bacteria, very few leucocytes.

In the above four cases of patients who had no gall-bladders, the magnesium sulphate brought about the same amount of bile as in cases with the gall-bladder intact. However, it was never acid, was of a lighter color, less viscid, more transparent and of lower specific gravity than in the cases of patients having gall-bladders even though normal. This confirms Lyon's contention, that magnesium sulphate injection drains the gall-bladder. It likewise shows that the magnesium sulphate stimulates greatly the flow of bile direct from the liver, and what we get after its employment is gall-bladder bile mixed with a large but probably variable amount of bile freshly secreted by the liver.

CASE 5.—T., aged 77, male. Had for two months suffered from nausea and severe pain in the stomach lasting for hours after meals, even interfering with sleep. First Duodenal examination yielded before magnesium sulphate, 5 c.c. clear, acid, golden yellow bile. After magnesium sulphate was used, there came 40 c.c. of clear, yellowish brown, acid bile. Then came 15 c.c. dirty brown bile. Then 60 c.c. dirty green bile containing much mucus, many leucocytes and bacteria. Later there came 30 c.c. of acid, light yellow bile with few leucocytes and bacteria. After this duodenal examination, the patient's symptoms were for a few days relieved, but later returned. The examination, or you might say the treatment was repeated seven days later. The bile obtained was much improved in appearance and bacterial content, and was neutral in reaction throughout. After this, the patient's stomach symptoms disappeared, and when last heard from, six weeks later, had not returned.

CASE 6.—H., aged 40, male, seen in consultation with Dr. O. W. Thie, had symptoms referable to the gall-bladder for over a year. Of late, pain and tenderness in gall-bladder region, chills, temperature 101 degrees. Magnesium sulphate instilled through the duodenal tube brought 50 c.c. very turbid, dark greenish brown, viscid, neutral bile, sp. gr. 1024, containing many leucocytes and bacteria, mainly streptococci. After that came 60 c.c. less turbid, more yellowish bile, sp. gr. 1010. Next day the symptoms were much improved, but again became aggravated the day after that. Magnesium sulphate was again

instilled and the bile obtained was of a much improved nature. Temporary abatement of symptoms again following the treatment, it was repeated every two or three days. In ten days the patient seemed cured and in a week was able to resume his occupation of track laborer.

CASE 7.—B., aged 47, female, had unmistakable symptoms of empyema of the gall-bladder. Nevertheless, the duodenal tube brought only normal bile. Operation by Dr. Dean disclosed an abscess which had already passed the confines of the gall-bladder and obliteration of the cystic duct. This put the infected contents of the gall-bladder out of reach of our tube, and of course we obtained bile only from the liver ducts, which was normal.

We investigated a number of other cases by instilling magnesium sulphate through the duodenal tube, later following them to the operating table. In the main our diagnoses were confirmed by the operative findings. However, we still place our main reliance on clinical symptoms in deciding the necessity of a surgical operation. From a therapeutic point of view, we think the application of magnesium sulphate through the duodenal tube has a definite field of usefulness. In early cases of gall-bladder infection and bile stasis it no doubt may, by draining the gall-bladder, prevent the more dangerous stages of infection or the formation of stones. Besides, we think it ought to be employed, at intervals, after cholecystectomy to prevent the dangerous sequelae to which these patients are often liable.

3206 Lafayette Ave.

THE PARALYSIS FLY *LUCILIA CAESAR*.
SOME OF THE DIFFICULTIES ENCOUNTERED
IN OBTAINING ITS TOXIC
VIRULENT LARVAE FOR EXPERIMENTAL
PURPOSES*

E. W. SAUNDERS, M.D.

ST. LOUIS

There are many noxious agents affecting animals and man which are under investigation now, but the paralysis fly has not as yet received the recognition that it deserves. I began my experiments with the larvae of this fly eight years ago, and as there appears to be at last a wide interest aroused, it seems an opportune time to publish a statement embodying the results of long experience as to the best method of obtaining larvae of the highest potency. The "Drop Head" of Couchone and Gerlier, the "Loupin III" of lambs in Scotland, Borna's disease of horses, the "Lamzietke" of cattle in South Africa, limberneck of fowl, "Posterior paralysis of hogs, botulism forage poisoning of cattle," "tick paraly-

sis" of the Northern Rockies, "Rose Chafer paralysis" of fowl, Avian beri-beri, Japanese beri-beri, American beri-beri (a form of peripheral multiple neuritis frequently seen in the victims of devitalized staple foods) acute poliomyelitis (sponadic and epidemic), each and all afford to the investigator a more or less acute paralytic syndrome for etiologic study. Epizootic affords an adequate and exclusive etiology for acute polio, limberneck and hog paralysis, and for the sporadic paralyses of animals, both domestic and wild. To an unknown extent it may be responsible for other diseases enumerated above, as it affects impartially all vertebrates so far as we know.

Lucilia Caesar is truly an ubiquitous insect, which thrives equally well in the hottest and the coldest climates, and is active in Alaska and in Sweden in the depth of winter, wherever it is sheltered from the cold. Naturally, it is an untamed and untameable creature which seeks the open whenever the weather is warm and commits suicide when in prison. It enters human habitations in summer time only to deposit its eggs. When trapped in the ordinary fly-trap, it beats itself to death against the walls of its cage within a few hours. It is possible, however, to keep it under glass in winter and in a large fly-house in summer, which is shaded and supplied with some form of animal life and with the food that it delights in, especially rotting fruit. It can be readily caught in a large fly-trap placed over boiling cabbage, which is the greatest attraction that can be offered. There is a fly bait furnished by a house in Berkeley, California, which attracts the *L. Caesar* alone and thus offers a great advantage to the experimenter, as the house-fly does not cumber the trap. The fly should be removed promptly to the fly-house and we suggest that a large, collapsing bag of cheese cloth be connected with the top of the trap so as to prevent the fly from beating itself to death against the sides of the cage. The fly-house should be placed under a shed in summer time and should consist of an inner and an outer circle of wire screening. A race-course is thus provided for the insect which will effectually prevent its pounding against the outer wall of its prison. The entrance to the fly-house should be provided with a long vestibule with three screen doors opening inward; or, better still, the vestibule should extend to the inner chamber of the rotunda.

A pig is the best animal to afford company to the fly. The carcasses of animals dead of limberneck should be placed in boxes of earth, not upon the ground. It was found in our earlier experiments that the flies could not live on carrion alone. Any rotting fruit is sufficient to keep them in good health and happy. When cold weather approaches, the sides of

*Read before the Ill.-Mo. Veterinary Association, East. St. Louis, March 17, 1921.

the shed should be boarded in and a stove placed inside so that experiments could be completed during cold weather.

Undoubtedly a hot-bed placed over the buried carcasses of chickens in the early spring would be a very successful mode of getting experimental material early wherever it is known that the fowls have died of limberneck in the late fall and had been buried. It is not yet known how the infection originates in nature, there may be some lower organism which furnishes the virus to the fly that is very widely scattered not only within the bounds of the inhabited earth but beyond. Frequently a case of polio has occurred in one of the members of a fishing or hunting party far beyond the confines of civilization. I and my collaborators have never succeeded in obtaining larvae of the greatest potency before mid-summer, although we have begun our search each year early in the spring. In this respect the *L. Caesar* epizootic is like all other epidemics and epizootics, in that the virulence of the infection is in direct ratio to its speed. This is true in laboratory experiments, in infections of the respiratory tract, in obligate insect-borne infections, and in infections of the gastrointestinal canal.

In epidemiologic experimentation the potency of larvae obtained in the open is exceedingly variable because we cannot discriminate between infected and noninfected *L. Caesar*, and also because it is difficult to distinguish *L. Caesar* from other species of carrion-fly. And yet, the most potent larvae that we obtained were gotten in this way during an epizootic of acute paralytic disease which destroyed fowls and hogs in large numbers and affected dogs, cats, cows, calves, colts, horses, while at the same time there was a rural epidemic of polio. Our usual method of preparing the material was to take all the larvae from a limberneck carcass, triturate them with glycerine and determine the lethal dose of this magma for a guinea pig, which is the most susceptible of all animals to the toxin. The next most susceptible is the young chicken. After succeeding with these animals we proceeded to infect young monkeys with the calculated dose. With highly potent material we never failed to infect the monkey within a day. Usually about eleven hours after the first dose the monkey would droop, show signs of profuse coryza, lose power of deglutition, and progressively general motor power. Death ensued by respiratory paralysis, except in the few animals that received a minimal dose, the respirations slowing down to four or five to the minute, then ceasing entirely while the heart would beat for five minutes after respiration ceased. If we could succeed in giving a small enough dose and keep the animal alive for six

days its spinal fluid injected into the spinal canal of a healthy young monkey would produce a typical Simian poliomyelitis. Usually on the eighth day after injection the animal would sicken and evince symptoms of progressive muscle group paralysis. Two of these animals survived the residual paralysis of the foreleg. One of them was accidentally killed one year later, and postmortem showed typical polio atrophy of the muscle group. The other was given to the Zoo in Forest Park.

It is earnestly hoped that many institutions and individual scientists will repeat our experiments in the coming fly season, and if further information is desired it will be gladly furnished by our group of investigators, Dr. T. Wistar White, Dr. Phil Hoffman, Dr. W. E. Wisdom, Dr. Reives and myself, or by Prof. Dutcher of the Minnesota University and his associate in this experiment, Mr. Wilkins.

1541 S. Grand Ave.

COUNTY SOCIETY ENDORSES DR. TOPPING

At the last meeting of the St. Francois County Medical Society which was held at Flat River, April 21, Dr. M. H. Topping of Flat River was unanimously endorsed for the position of superintendent of Hospital No. 4, Farmington. Dr. Topping has been a resident of St. Francois County for more than twenty years, having been continuously engaged in the practice of medicine. Notwithstanding the phrase that a "Prophet is not without honor save in his own country," we feel that this honor should be bestowed upon some one whose home is in the county, ability of course being considered, and we know of no one more suited for the position in question than Dr. Topping. He is a man of ability, geniality, and above all, conscientious, a trait of paramount importance in a position of this kind.

Dr. Topping has always been an enthusiastic medical society man, always ready to do something for the betterment of his profession. He is an ex-président of the St. Francois County Medical Society. We feel that if Dr. Topping is appointed to this position the appointment will meet the approval of both the medical profession and the laity, and that general satisfaction will be given.

ST. FRANCOIS COUNTY MEDICAL SOCIETY,
G. E. CECIL, *Secretary*.

THE JOURNAL

OF THE

Missouri State Medical Association

MAY, 1921.

EDITORIALS

REFERENDUM ON SENATE BILL 433

Petitions for a referendum on S. B. 433, which strikes the word "reputable" from the statute governing medical colleges thus depriving the state board of health of authority to standardize medical schools, have been sent to physicians and others who are opposed to lowering the standards of medical education in Missouri. The movement will be under the direction of the Missouri Public Health League, an organization formed at a mass meeting held in St. Louis on April 26 following the adoption of resolutions by the St. Louis Medical Society endorsing such a step. Numerous communications from members throughout the state show that the sentiment for a referendum is widespread and the passage of the law severely criticized.

There are many who doubt the wisdom of an attempt to invoke the referendum because if it fails it will mean permanency of the new law; and there are others who believe that the board of health may, even under the provisions of the S. B. 433, still prevent the licensure of incompetents. A recent ruling of the attorney-general of the state, however, silences that argument for, according to this ruling, the board has no discriminatory powers whatsoever to grade or standardize the schools; this now can only be done by the courts on appeal from the board's refusal to examine the graduates of a school. Herein lies our hope for the establishment beyond further controversy of what shall constitute a medical school in good standing, for it is not conceivable that our circuit courts would countenance the operation of diploma mills. They would, we are convinced, uphold the minimum requirements of the board of health which are acknowledged to be moderate and easily complied with.

Another phase of the question advanced by those who favor the new law is, that the board of health, if composed of men with strong convictions for maintaining high standards, can eliminate the unfit and incompetent applicants at the time of examination by making the tests so rigid that only properly trained men can make the passing grade. That is surely a mighty large order to hand a body of busy professional men serving without pay as guardians

of the public health while at the same time dismantling their defenses. For the new law not only removes the word "reputable" from the statute but expressly states that the examinations shall be elementary in character and, not satisfied with this wreckage of our standards, gives the court the right to try all appeals as new cases and render final decisions. The spectacle of having the board of health, the statutory adviser to the governor on health conditions, haled into court by every tyro from low-grade schools is not a pleasant vision.

The plain purpose of the law is to make it easy for poorly educated persons to enter poorly equipped medical schools, and then force the state board of health to examine them. Many of the applicants will get through and those who fail to pass, if the board has the temerity to flunk any of them, will summons the official guardians of the public health into court to prove that they are honest men and not minions of "the medical trust."

We do not believe that a majority of the people of Missouri will be satisfied with low standards of medical education and the opportunity to express their opinion will be presented when the referendum is submitted on the ballot. If this law is then sustained by the people the medical profession cannot be held responsible for the consequences.

THE PROGRAM FOR THE STATE MEETING AT ST. JOSEPH

In this issue we present the program arranged for the annual meeting at St. Joseph, Tuesday, Wednesday and Thursday, May 24, 25, 26. The Committee on Scientific Work has endeavored to gather a sufficient number of papers on many topics so that all members might find a stimulus to attend the session and hear papers on subjects of immediate interest to them. There are more papers scheduled for the meeting than has been customary during the past few years but the committee believes that all of them can be read in the allotted time.

All general meetings will be held in the Crystal Room of the Robidoux Hotel and the exhibits will be displayed on the ground floor of the hotel. The House of Delegates will meet in the Blue Room and the secretaries will also hold their meeting in the Blue Room at an hour not otherwise filled.

On Tuesday night there will be a public meeting in the Crystal Room of the Robidoux Hotel when popular lectures will be delivered on hospitals and tuberculosis. Wednesday night will be crowded with events. On that night the secretaries will be banqueted by the Association from 6 to 8; from 8 to 10 there

will be a General Meeting in the Crystal Room to discuss legislative matters and this session will be followed by a smoker given by the Buchanan County Medical Society. On another page we publish the program in full.

TRIBUTE TO DR. A. W. McALESTER

In this issue we publish a full account of the celebration arranged by the friends of Dr. A. W. McAlester of Columbia on the arrival of the Nestor of the medical profession of Missouri at the eightieth mile post in his journey through life, "who is still practicing his specialty of dispensing the milk of human kindness to all within his reach." The Boone County Medical Society initiated the celebration and in the announcement said they would have arranged "an appropriate commemoration of the eightieth anniversary of his birth to take place on the proper date, January the first, if the spirit of youthfulness in this octogenarian had not hidden the facts concerning his age and birthday from his fellow members." But the secret got out and arrangements were made to hold the birthday banquet on February 15.

The event was an inspiration to everyone who attended the meeting and in order that the expressions of love and esteem for Dr. McAlester from those who spoke—expressions of a sentiment that is shared by every member of our Association—may be preserved in the permanent records of our organization we give space in another column to the entire proceedings. We feel sure that our members will read the story of the meeting with a lively interest and a feeling of pride that we have in our profession one who has accomplished so much for the advancement of medical science and the uplift of standards of practice as Dr. McAlester has done.

THE HODGEN LECTURE ON SURGERY

Perpetuating the memory of one who has accomplished lasting benefits for mankind is a duty that falls upon the succeeding generations and they honor themselves in the recognition and fulfillment of this obligation. In the long line of followers of the healing art in Missouri who have distinguished themselves in the profession and have been applauded and honored for their work, perhaps none was more beloved by his friends and the people nor more devoted to his calling than Dr. John T. Hodgen of St. Louis, inventor of the Hodgen splint and a former president of the American Medical Association. In his home city and state as well as in numerous places where his talent and

achievements are known, his memory will live as an inspiration to others. Recently a permanent and enduring memorial was erected as a tribute to his genius when the St. Louis Surgical Society inaugurated the Hodgen Lecture on Surgery, to be delivered annually by some distinguished member of the profession on the invitation of the Society. The first lecture was delivered by Dr. Rudolph Matas of New Orleans on March 26 in the auditorium of the Washington University School of Medicine, at St. Louis, his subject being, "The Effects of Arteriovenous Aneurysms upon the General Circulation in Their Relation to the Symptomatology, Prognosis and Treatment of These Lesions."

NEWS NOTES

DR. B. S. HOWELL of Princeton will re-open his hospital in that city.

DELEGATES should deposit their credentials with clerk at registration desk.

THE State Anatomical Board will meet on the mezzanine floor of the Robidoux Hotel, St. Joseph, Wednesday, May 26, at 1 p. m.

SHOW your pocket card at the registration desk at the St. Joseph meeting. It will facilitate registration.

DR. ELI TRIMBLE of Seymour was compelled to spend several weeks in the Springfield Hospital during April on account of an affliction of his eyes.

GOVERNOR HYDE has appointed Dr. Rudolph S. Vitt of St. Louis and Dr. Franklin E. Murphy of Kansas City as members of the State Board of Health.

DR. E. H. BULLOCK, Health Director of Kansas City, was slightly injured in an automobile accident April 25, when his car was overturned by a service car.

DR. J. B. GRAVES of Farmington, President of St. Francois County Medical Society, has been under observation for some time with symptoms pointing to chronic appendicitis.

DR. W. F. SCHLICHT, who has been a member of the staff of State Hospital No. 3 at Nevada for some time, has resigned from the staff and returned to his previous location at Niangua.

DRS. ALBERT ANDREWS of Worth, A. C. Pettijohn, O. A. Bendel, W. J. Hunt and Otto A. Schmid of St. Joseph, have been elected assistant physicians at State Hospital No. 2, St. Joseph.

DR. JOHN GREEN, JR. of St. Louis was the guest of the Section on Ophthalmology of the Tennessee State Medical Association at its meeting in April, and delivered an address entitled "Tonometers and Tonometry."

DR. CARL BITTER of St. Charles had a narrow escape from serious injuries on April 21 when his car skidded over an embankment and turned over. The car was damaged but Dr. Bitter and the chauffeur escaped injury.

DR. B. LANDIS ELLIOTT of St. Louis who has been abroad for a year or more in the service of the American Red Cross has returned and will be associated with Dr. Francis M. Barnes, Jr., in the practice of neurology and psychiatry.

ON April 11 a fire destroyed the offices of Drs. Highfill, Werner and Bruce at Marshfield when one of the largest brick buildings in that city was burned. The doctors lost their entire equipment and a drug store belonging to Dr. Highfill and his son was completely destroyed.

A PHYSICIAN is needed at Delta, Cape Girardeau County, a thriving town in a good farming community on the Iron Mountain and Cotton Belt Railroads. Any physician interested may learn the particulars by addressing Messrs. Goodwin and Jean, wholesale dealers in eggs and poultry, Delta, Mo.

THE members of the Pettis County Medical Society have established a clinic at Sedalia for the free treatment of persons who cannot pay for medical service. The clinic will be operated in the hospital and members of the Pettis County Medical Society as well as dentists will serve at stated intervals.

DR. W. J. HARNED of Bethany, his wife and daughter, were injured April 24 when the car in which they were riding turned over and rolled into a ditch. Mrs. Harned sustained a dislocation of the shoulder, the others being slightly cut and bruised.

A MOVEMENT is on foot in Macon to erect and equip a modern hospital in that city. The Macon County Medical Society discussed the subject at a recent meeting and appointed Dr.

C. W. Reagan of Macon and Dr. T. C. Gronoway of Bevier a committee to investigate the feasibility of the plan.

THE committee of arrangements for the annual meeting at St. Joseph are making special preparations to entertain the ladies who may accompany the members and guests. The committee hopes that a large number of ladies will attend the meeting. Mrs. J. F. Owens is chairman of the committee on entertainment of the ladies.

THE physicians of Kansas City are planning to engage a special Pullman through to Boston for the A. M. A. meeting. There will be no extra charge for reservations on that car. Those interested in the plan should send their names and the number in their party to Secretary, Jackson County Medical Society, General Hospital, Kansas City, Mo. Data on routes and schedule will be sent to them when decided on.

Two bandits called upon Dr. John Edmondson of Kansas City at his office April 29 and robbed him of jewelry valued at \$700 and \$60 in money. After robbing him the thieves bound the doctor's legs with his own necktie, tied his arms with a towel, gagged him with another towel, and then warned him not to call for help for at least five minutes. After struggling for half an hour Dr. Edmondson managed to release himself and notified the police.

IN our April issue several errors crept into the list of changes of address which we now correct. Dr. W. J. Hans, St. Louis, was reported having changed his address to 4532 Virginia Ave. His address is 700 Kingshighway Park. Dr. Q. U. Newell, St. Louis, was reported changing his office address from 411 Wall Bldg., to 305 Wall Bldg. His address is 411 Wall Bldg. Dr. O. R. Sevin, St. Louis, was reported moved to Wichita, Kansas. His address is 408 Humboldt Bldg., St. Louis.

THE Jackson County Medical Society has moved its headquarters from the Rialto Building, Kansas City, to the General Hospital at 24th and Cherry Streets. The medical library, which is now owned by the Jackson County Medical Society, has also been moved to the General Hospital. The new location possesses many advantages over the down town meeting place, particularly in furnishing clinical material for the meetings and gives the nurses and internes an opportunity to advantage themselves by attending the meetings.

THE negro Y. W. C. A. of St. Joseph observed health week April 3-10 when lectures were given in the negro churches by the pastors and physicians on health protection. General hygiene, including venereal disease prevention, the health of children, sanitary care of school buildings and premises, anti-fly crusade and tuberculosis were some of the subjects made topics for special discussion on different days. A thorough cleaning of the churches was the order for one day and a general clean-up day closed the activities for the week.

Two lepers who have been in the care of the City of St. Louis will be transported to the Federal Leprosarium at Garville, La., as soon as some additional construction work on the leprosarium has been completed. One of the St. Louis lepers is a Chinaman named Mon Wing who has been at the Koch Hospital for fourteen years. His case is so far advanced that he moves with great difficulty and is practically confined to his bed. The other leper is Alex Markakis, a Greek, who has been under the care of the hospital department since 1919.

UNDER the title "Mulford on Land and Sea," the H. K. Mulford Company have produced a handsomely illustrated pamphlet for circulation among the members of the medical profession. In the pamphlet the company describes in a brief but clear fashion how they concentrated their resources upon the problem of supplying biological and medical products during the war not only to our army and navy but to every combatant fighting under the allied flag. A copy of the brochure will be sent to any physician making request for it.

THE Physicians-Surgeons Exchange having offices in St. Joseph and St. Louis invites our members who attend the meeting at St. Joseph to utilize the facilities of the Exchange in St. Joseph during their stay in that city. The telephone number in St. Joseph is Main 573. When you register for the meeting call up Main 573 and tell the Exchange where you can be found. They will take care of phone calls, both local and long distance, and locate you. The service is extended to all members of our Association who attend the meeting.

THE State Medical Society of Wisconsin will celebrate its seventy-fifth birthday by holding a "Home-Coming" meeting in Milwaukee, September 7, 8 and 9, 1921. All former Wisconsin men, whether they have practiced there or left Wisconsin to study medicine, practicing elsewhere after graduating, are invited to

this home-coming. The officers of the Society are anxious to secure at this time for mailing purposes the names of all former Wisconsin men. They will confer a favor by sending their names and addresses to Dr. Rock Sleyter, Secretary, Wauwatosa, Wisconsin.

DR. C. H. SHUTT, Hospital Commissioner of St. Louis, has resigned that office effective at the pleasure of the director of public welfare. Dr. Shutt was appointed Hospital Commissioner in 1911 and has completed ten years of continuous service in the position. Entering the hospital service of St. Louis sixteen years ago as junior interne at the Female Hospital he later became senior interne at the City Hospital, superintendent in charge of the Emergency Hospital and assistant superintendent of the City Hospital. After a year of study in Europe and eight months' private practice following his return from abroad, he was appointed Hospital Commissioner. Following up the hospital system inaugurated by Dr. John C. Morfit, the first Hospital Commissioner under the new charter, the service has expanded and grown to immense dimensions under Dr. Shutt's administration of this important post. Thoroughly well organized, excellently staffed under an arrangement which has remained effective since its inauguration, Dr. Shutt leaves the hospital system of St. Louis in such good condition that his work will ever remain a credit to his management of the eleemosynary institutions of St. Louis.

THE success of the Institute on Venereal Disease Control and Social Hygiene recently conducted by the Public Health Service suggests that public health officers, practicing physicians, nurses, social workers and clinicians are eager for more training and that they will come long distances to get that training (650 attended the Venereal Disease Institute) when the best kind of instruction is offered to them. The United States Public Health Service therefore proposes to conduct a general public health institute to take place during the fall of 1921 and to offer 25 to 30 courses, including the following:

Diagnosis and treatment of tuberculosis, nutrition in health and disease, sanitary engineering, clinic nursing and social work, clinic management, courses in syphilis and gonorrhea, mental hygiene, industrial hygiene, child hygiene, vital statistics, laboratory diagnosis, health centers, various courses in psychology and sociology.

The Institute faculty will be composed of 75 to 100 leading authorities, including William H. Welch, William H. Park, John A. Fordyce, Valeria H. Parker, John H. Stokes,

Michael M. Davis, Jr., William A. White, Anna Garlin Spencer, Irving Fisher, C. V. Chapin, M. H. Rosenau.

MEMBERS who expect to attend the annual meeting at St. Joseph should reserve hotel accommodations in advance so that they will not be discommoded by waiting to be assigned to rooms. The Hotel Robidoux will be headquarters and all meetings will be held in that hotel. The rates for rooms in the Robidoux and other hotels follow:

Hotel Robidoux: Single without bath, \$2.00-\$2.50 and \$3.00; double without bath, \$3.00-\$4.00; single with bath, \$3.00-\$3.50 and \$4.00; double with bath, \$5.00-\$5.50 and \$6.00.

St. Francis: Single without bath, \$1.75-\$2.50; double without bath, \$2.50-\$3.50; single with bath, \$2.50-\$3.50; double with bath, \$3.50-\$5.00.

St. Charles: Single without bath, \$1.50; double without bath, \$3.00; single with bath, \$2.00-\$2.50; double with bath, \$3.50-\$4.50.

Metropole: Single without bath, \$1.50-\$2.00; double without bath, \$2.50; single with bath, \$2.00-\$3.00; double with bath, \$3.00-\$4.00.

Those who may desire accommodations in private homes and boarding houses can reserve quarters in advance by writing to Dr. F. H. Spencer, Chairman of the Committee of Arrangements, St. Joseph.

OBITUARY

DORA GREENE WILSON, M.D.

Dr. Dora Greene Wilson was born in New Albany, Indiana, November 8, 1864, and died at the Michael Reese Hospital, Chicago, April 4, 1921, and was buried in Forest Hill Cemetery, Kansas City, April 6.

Dr. Wilson graduated from the Northwestern University Woman's Medical School in 1886, and practically the whole of her professional life was spent in Kansas City. She had devoted much time and study to medical gynecology, and at the time of her death was in Chicago taking a special course in work along this line. She was one of the founders of the Woman's and Children's Hospital, and at various times served as Dean and Professor of Physiology in the Woman's Medical College of Kansas City, and as Professor of Physiology in the College of Physicians and Surgeons, Kansas City, Kansas.

Dr. Wilson always took an active interest in medical organization work, and has been a member of this society since 1903, serving on different committees and as temporary Vice-

President in 1917. She was also a leader in many social and civic organizations, particularly the W. C. T. U., The Woman's Suffrage Club, Woman's Dining Club, Woman's City Club and Atheneum. Although never strong and robust she was always willing and conscientious and could be depended upon to do her part in any charitable or public work.

Dr. Wilson leaves a husband, J. E. Wilson, of Chicago, a son, Wesley J. Wilson, of Kansas City, a sister, Mrs. C. R. Hughes, of Kansas City, Kansas, and a brother, Philo P. Greene, of Salt Lake City, to mourn her untimely death. The Jackson County Medical Society has lost a faithful and devoted member, and the public a benefactor and a friend.

Necrologic Committee,

A. A. FREYMAN,
C. LESTER HALL,
WILLIAM F. KUHN.

—Jackson County Med. Socy. Bulletin.

JOSEPH F. ROBINSON, M.D.

Dr. J. F. Robinson, a member of the Vernon County Medical Society, died at the Nevada Sanitarium, Nevada, Mo., April 9, 1921, of prostatic disease and was buried at Newton Burial Park, April 11.

Dr. Robinson was born near Knobnoster, Johnson County, Missouri, February 15, 1847, and graduated from the Jefferson Medical College in 1875. He located at Windsor, Henry County, where he practiced medicine until 1893, when he moved to Nevada, having under the administration of Governor Stone, been elected superintendent of the State Hospital No. 3, where he continued to serve until April, 1905.

He was a Sir Knight in O'Sullivan Commandery No. 56 of Nevada, and a member of the Ararat Temple, Nobles of Mystic Shrine of Kansas City, Missouri. Dr. Robinson was a lover of fine stock and is credited with being one of the best judges of fine horses in Missouri. For a number of years he owned and conducted a number of stock farms in Henry, Bates and Vernon Counties. He possessed a cheerful disposition, was broad minded and liberal in his views. To those who knew him best these qualities of mind and heart attracted lasting friendship.

G. C. WILSON,
T. B. M. CRAIG,
J. T. HORNBACK,

Committee on Necrology, Vernon County Medical Society.

MISCELLANY

A REPORT OF THE CELEBRATION OF THE EIGHTIETH BIRTHDAY OF DR. ANDREW WALKER MCALESTER, INITIATED BY THE BOONE COUNTY MEDICAL SOCIETY, AND ATTENDED BY THREE HUNDRED FRIENDS

The Daniel Boone Tavern, Columbia, Missouri,
February 15, A. D. 1921

The Toastmaster (Dr. A. R. McComas of Sturgeon): Ladies and Gentlemen: This is indeed a happy occasion for us all. In doing honor to our guest, Dr. A. W. McAlester, a foremost citizen of Missouri, we honor ourselves. He stands preeminent among the sons and adopted sons of this grand old county. During his long life, he has continuously held aloft those principles which are the guidance of the lives of all right thinking people. His long service to humanity, both as a teacher and as a practitioner of medicine, together with his activities in things of state, place him on a pedestal—I might say in a class by himself. (Applause.) But I would have you remember that in all these important undertakings he has been most happily seconded and advised by a good woman (applause)—a woman whom it has been my great privilege to know intimately, and whilst she has been little seen as compared to the Doctor himself, she was, nevertheless, at her post as he was at his. (Applause.)

We have rather a long program—I would say that the Wabash special train will leave at 12 o'clock, so no one need get uneasy until 11:45. (Laughter.) I will now call upon the reader, Miss Naana L. Forbes, of Stephens College. (Applause.)

Miss Forbes: Having had very little experience with physicians in a professional way, should it be necessary for me to call I probably would feel very much like the gentleman described by Ellis Parker Butler: "Did you ever hear an amateur at sickness describe his symptoms? The small man walked into the physician's office, trying to look as if he was not ashamed of asking advice. He took a seat immediately in front of the doctor.

"Now, Doc," he began glibly, 'I'm not sick; I'm never sick a day in the year. Don't know what sickness is, but I've got a little pain. Not that it worries me at all. I don't worry about such things, and I guess I have my share of them. But it isn't like me to worry; I'm not built that way. I go along and don't worry, no matter how sick I am, and I guess I'm sicker than most men a good part of the time. But I don't let on. I'm used to it. But this pain has got me worried to death! It would worry anyone. Nothing serious, of course, but pretty severe; fact is, can't stand it any longer. If you knew how I suffer with this pain! But it don't worry me—I don't let it. It's nothing to worry about. Just one of these little aches, I guess, that come and go. Fact is, I was ashamed to come to a doctor for such a little thing. I don't mind it; very little pain, you know. Can hardly feel it, but my wife worries. She would have me come to see you. (Laughter.)

"You see, Doc, the pain is right here in my neck. Seems to be right in my Adam's apple. It feels like a pin. That's it, exactly; like a pin sticking into me. Just that sharp, pricking pain, but larger. You know what I mean—feels like a knob in there; like a round, polished knob, something like a door-knob, pressing all the time! It isn't a pain, understand, it's an ache. A cold, aching sensation like a snowball. Yes, sure, that describes it exactly. Just like a snowball, only the thing throbs all the time, and burns. Why, it is red hot, just like a red hot poker,

and it was red hot clear down into my chest, but darting back and forth, like a bolt of lightning.' (Laughter.) 'I don't know whether you catch just what I mean, Doc, but you can imagine how a bristle-brush would feel if you swallowed it! A brush with bristles all around it, like a pipe cleaner. That gives you the idea exactly. It's just that kind of a tickling sensation, as if I had swallowed something soft and fuzzy, like a wool mitten. I tell you it has got me worried, too. Scared stiff, I might say. (Laughter.)

"Now, I don't want you to think I'm worried about it. I wouldn't be if it wasn't so persistent. It's one of those persistent pains that comes and goes. Feels like a penny had lodged there where the aching is. One of those sharp, twinging pains, like rheumatism or toothache. Not a jumping toothache, but the slow, steady kind, like a corn.' (Laughter.) 'You know what I mean. Sort of a dull ache, kind of a burning. I tell you, I am dreadfully frightened. My wife said it was nothing, but I know better. It seems to be in the back of my neck. That's what frightened me. It reminds me of spinal meningitis, or consumption—as if I had appendicitis in my back, only it's lower down. It seems to be in my chest. I'm afraid of these pains that stay right in one spot. They are so apt to get chronic.' (Laughter.)

"That's what I don't like about this pain of mine. It's so chronic. If it isn't in one place it's in another. Sort of shoots all around. You know what I mean—dashes around everywhere. I want you to know exactly what I mean. You know how colic feels? Well, it isn't anything like that! (Laughter.)

"I should say it was more like a crimson pain, sort of a greenish crimson. Nearly blue, you know. Kind of flashing, like an electric light or a match. Sort of an empty feeling, as though it was a void there, with sharp points, like a square chunk of lead, only harder. More like granite, or one of those long dry crusts of bread, thin and narrow but rough. (Laughter.)

"Now, Doc, you know just how it is. Those are the symptoms, and all I want is just a small prescription to ease it up. That's all! (Laughter.) 'Something like a pill, or a dose of some kind, I guess a plaster would be the right thing. One of these plasters with holes in them. You know what I mean. I don't want anything that would be hard to take.' (Laughter.) 'It isn't worth it for a little thing like this. If I let it alone it would cure itself. What I want is something to put on, like witch-hazel, or iodine, or something of that kind. But if you say "operate," I'm willing.' (Laughter.) 'I think, myself, an operation is what it needs. Cut out the tonsils, you know, or fumigate it, or cauterize. Something of that sort!' (Prolonged laughter and applause.)

* * * * *

The Toastmaster: You are all acquainted with the next speaker on the program—President A. Ross Hill. (Applause.) He will speak on "Dr. McAlester and University Medical Education."

Dr. Hill: Mr. Toastmaster, Dr. and Mrs. McAlester, Ladies and Gentlemen: During the recital we have just listened to, setting forth in a patient's own terms the experiences on which a diagnosis was expected I was reminded of the story of a medical student from the backwoods, who in reporting on his examination for the M.D. degree said the examiner asked him, "What is infantile paralysis?" and he replied, "That is anterior poliomyelitis," and "My God, wasn't he surprised!" (Laughter.) So the doctors present could probably give diagnoses for the case described to us that would equally surprise and confound us.

Being a layman, it is fortunate that I do not have to speak tonight on "medicine" or even on "medical education," but the subject assigned to me is one that I happen to have some information on—the services to medical education of our honored guest, whose eighty years of worthy service we celebrate tonight. As I met him downstairs before the banquet, I was reminded of a letter I had received from a friend only yesterday in which he remarked that he felt inclined to seek a position in another university, "but at the age of fifty-five it is not worth while for a man to seek a change in positions in America," at the same time reminding me that he and I listened to lectures by German university professors who had already passed three score years and ten. I recalled that Zeller was eighty years of age when I took his lectures in Greek philosophy at the University of Berlin, and by living and working with youth Dr. McAlester has retained the youthful spirit even more fully than these men. So I congratulate him tonight on the fact that at eighty he is in such health and general physical condition that we can with some confidence in fulfillment wish him many happy returns. (Applause.)

I have not had the pleasure of associating with Dr. McAlester so intimately and so long as some others who are on the program, but it was my good fortune, along with Dean Jones and former Dean Waters, to be his colleague for four years on the Committee of Deans in the University of Missouri. And in traveling over the state as dean of the newly organized school of education, it often fell to my lot to travel with Dr. McAlester, as his surgical services were then much in demand in every section of Missouri. I thus came to get acquainted with his ideals in medical education and to know something of the dreams he had for the medical school of this University. While then I might speak of his human qualities, his sound judgment as an executive, and his stimulating influence upon students, I find it convenient tonight to limit myself, partly because of the brevity required, to his aims and accomplishments in "University Medical Education," the subject specifically assigned me.

In early days most medical schools just happened, as it were. They began as associations of practicing physicians to teach medicine, more as an art than as a science. Medical education at that time was better organized than legal education, which was largely a matter of directing the reading of a young clerk in the office of an individual lawyer. But these medical schools had no connection or at best only a nominal connection with universities, and they were not essentially teaching institutions as we conceive of teaching today. The teaching of medicine was not a profession in itself, but practicing physicians did a little teaching in medical schools as a "side issue." Now Dr. McAlester was one of the first men in this country who conceived of medical teaching in any form as a profession, and he sought to put his ideals into practice by advocating and pointing the way to the establishment of the Medical Department of the University of Missouri—he was in fact the Father of our School of Medicine. (Applause.)

Under the leadership of Dr. McAlester, loyally assisted by the late Dr. Woodson Moss and others, the fundamental medical branches were early put upon a scientific and professional teaching basis, and later well trained teachers of anatomy, physiology and pathology and bacteriology were introduced who gave their full time to teaching and investigation, and the school of medicine here won a reputation second to none for instruction in these fundamental medical sciences.

Yet I think it is still more to Dr. McAlester's credit from the standpoints of originality, initiative

and leadership that he was the very first man in this section of the country to appreciate the significance and importance of putting the clinical branches on a professional teaching basis. He conceived of and sought to establish a teaching hospital connected with this University, which, like a laboratory, should train young medical students to careful and analytic study and diagnosis of disease, and he insisted that such a teaching hospital must be controlled by the University as fully as the laboratories in the fundamental branches. Handicapped by insufficient funds, the indifference of the medical profession, and the general notions prevailing in medical education at that time, he never secured the complete hospital facilities that he hoped for, but he did in the erection of Parker Memorial Hospital get a beginning in the right direction, and until his retirement it remained strictly a teaching hospital, even what is known as a "closed hospital."

During Dr. McAlester's last year in the deanship he and I appealed to the legislature to at least double the size of that hospital in order that we might come somewhere near to the point of keeping abreast of advancing standards in clinical teaching. But when the legislature of 1909 failed to grant this small appropriation medical education here faced a crisis; he accepted a pension from the Carnegie Foundation and recommended the temporary suspension of clinical instruction till reasonably adequate hospital facilities could be secured, for

"He could dream and not make dreams his master,
And he could think yet not make thoughts his aim."

And this brings to mind another phase of the problem of medical education in this University, on which I received my first ideas from Dr. McAlester while we were traveling together as deans. He insisted that it is not the number of patients casually observed by a medical student that counts in his training, but the care with which he studies a few typical cases. The thing to be mastered is diagnosis of disease, and "it is not personal acquaintance with hundreds of diseases that he must acquire in the medical school; it is power to determine with what disease or diseases he is dealing, and to recognize the condition of his patient from day to day or even from hour to hour." Thus he contended that even with our limited clinical facilities we were giving as sound a medical training here as were other medical schools in this section surrounded though they were with larger hospitals that were not organized as teaching hospitals.

Besides, he was too human and too keen an observer of human nature not to appreciate the fact that an important part of medical education is *education* itself, that which comes from daily contact and association with other students of other interests in lecture hall and playground and club or fraternity, and he believed thoroughly that the proper place to train the medical practitioners of Missouri is right here on the campus of the State University where they can be educated in constant contact with prospective lawyers, and farmers, and engineers, and teachers, and editors, and business men. He knew full well that the doctor always will be the adviser of youth, and that the doctor with a large social experience will be a better adviser than one trained in the narrower atmosphere of an isolated medical school.

Most of us who have to work against odds waver at times in our fidelity to an ideal, and he like others may have been willing to accept some compromise involving the transfer of clinical instruction from Columbia to one of the large cities. But at bottom his faith was in the ideal of a com-

plete medical curriculum at the seat of the State University, and we who have contended ever since for the establishment of a state hospital under University control and for the re-establishment of four years of medical education here, are indebted to Dr. McAlester for the lessons on this point learned from him. And if he were in active service today I am confident that he would be leading the agitation for a new and large hospital on the University campus that would at the same time serve the purposes of medical education and offer medical treatment and hospital care to the sick of the entire state.

Dr. McAlester put the fundamental medical branches on a strictly scientific teaching basis; he organized here a teaching hospital with modern ideals of clinical instruction, and he failed to see his ideals completely realized only because the State of Missouri failed to furnish adequate funds for carrying on his great work. But his ideals are still with us, the University authorities are striving and will continue to strive for their realization in the confident hope that some day Missouri will duplicate the organization of medical education now seen at the state universities of Virginia and Michigan and Iowa and soon to be realized in Wisconsin also.

So I bring him tonight a message from the Medical Faculty, and indeed from the University Faculty, and from the Board of Curators, that we are grateful to him for the ideals in medical education he has bequeathed to us, that we intend to adhere to them and carry them out fully as soon as the legislature of Missouri will make their realization possible, and when this shall have been accomplished, the credit will be due primarily to Dr. Andrew W. McAlester. (Applause.)

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The Toastmaster: The next speaker on the program was unable to be present (Dr. W. F. Morrow), but we have in his stead a gentleman who knows the part that Dr. McAlester has taken in writing into the statutes of the State of Missouri the health laws that we now have and which are, if left undisturbed by the present legislature, second to none in the United States. I will call on Dr. Herman Pearce, of Kansas City, a member of the Missouri State Medical Association.

Dr. Pearce: Mr. Toastmaster, Ladies and Gentlemen: I have before me only a half-filled glass of water, but I ask a boon of this audience—that we rise and drink a toast to “The American Girl, God bless her, there’s nothing in the world like her.” (Amid applause, the guests arose and drank the toast.) I certainly thank you. It would be hard to account for the taste of an audience which has listened to the songs we have heard, and the recitations of the gifted lady, and the story which Dr. Hill has told us of the doings of the guest we have come to honor—I can’t conceive why a mere Kansas City doctor should be called to add anything to the program.

I shall not attempt to go over the work of Dr. McAlester on behalf of medical education because Dr. Hill has told you of it better than I could. When we think of Dr. McAlester, we think of the Medical Department of the University of Missouri, and then we think of the State of Missouri. No one has lived the life of a Missourian more actively than Dr. McAlester. He was here in those bitter reconstruction days when Missouri was emerging from the war. We were hated by the North because we had been a slave state and were hated by the South because we had been a Union state. The Missouri State Medical Association had not met for years and it was Dr. McAlester’s strong hand that helped draw us together and started us again along the trail that President Hill has so graphically and

splendidly described to you. The requirements for admission to the University and other medical schools bear today the imprint of his thoughtful mind. The organization of our Board of Health, its installation as an active, working body in the state; the Medical Department of the University—more than the father of these is he: he is the father of the ideals of medicine in the State of Missouri. (Applause.)

Men react so differently to the influences which approach and surround them in daily living. Some men do not react—they explode. But Dr. McAlester was never one of these. He tells me he is Irish and English and Scotch, but the Irish and English are fading in him as he grows older and the blood of his Scotch ancestry comes more strongly, for he is growing even straighter and stronger. He ought to be proud, and we are all proud, that he has kept faith with the stern ideals of the Scotch. I attended the annual reunion of the Clan MacDonald the other day in Kansas City, and the Committee on Charity, Corrections and Relief reported the relief of many cases of distress and destitution, but never once have they been called upon to help anyone out of the criminal court—and they thought it a good recommendation for the honor of the constitution, the Holy Bible, and Scotch oats! (Laughter.) It is that characteristic of obedience to law that drives us straight forward to high ideals and such characterize this man’s life.

Many of us here tonight with silvered hair remember that back in 1901 we tried to throw off the bad effects of cheap medical colleges which overran the State of Missouri, and undertook to clean our own house. You remember the gathering in the legislative halls of the old state house. You remember the little committee room and the open fire where Bill Phelps used to interview men and try to help us out. Again and again we called Andrew W. McAlester and considered how we might outwit our enemies and save the day for medical education in the state. Never did we call on him in vain. Always he was conservative and careful; he moved quickly, after deliberation. One day we were discussing one fellow who was a particularly unpleasant sort of a man and had practically despaired of him, when Dr. McAlester said, “He will come through, all right, but he will be late. He will be like the old man’s hound dog who would never keep up with the pack and never seemed to be of any account. Finally the dog died and the old man looked at him and said, ‘That dog is awful slow. Come the Judgment Day and Gabriel will say to the men, “All ye dead men, come forth,” and all the dead men will come forth, and then he will say, “All ye dead women, come forth,” and all the dead women will come forth, and then he will say, “Now, all ye dead dogs, come forth,” but this one won’t come fourth—he will come about seventh or eighth!’ (Laughter.) And that’s the way with that legislator, he may be slow, but he will come through yet”—and he did.

And you remember that when we won the fight we settled down to a better condition of things which we still have with us, and which we hope our present legislature will not overthrow.

Dr. McAlester’s latest child is perhaps the one he loves best—and that is the bill providing for Deputy Medical Health Officers. He is working for it, hard, and he wants us all to help him, and we are going to do it. He is putting it through. And he is gathering those men around him in the State University and teaching them hygiene and how to make people better. He always liked to reach down into the lives of people and mix with them as they lived. He liked to make his ideals practical.

We all know that as our hair silvers we see be-

fore us, looming on the horizon, a tower. In that tower there is a wide, swinging door and it becomes apparent little by little that everyone's path leads toward that door. When one reaches the door it swings open, the traveler passes through and goes into the unknown beyond and we do not see him any more. Sometimes it is hard for us to see our tracks approaching closer and closer to that tower. We know that men revere flags and fight for them as emblems, and it is the privilege of brave men and women to place on that tower the flag of righteousness and of service to others, and by means of that emblem they rob that tower of its terror. In common with you all, we hope for Dr. McAlester a full score of years before he shall approach that dread tower, but when he must go through its portals there will be unfurled the flag of service to the people of Missouri testifying that through his ideals of medicine and of education the lives of all of us have been made better because Andrew McAlester has lived among us. (Applause.)

The Toastmaster: The next speaker on the program, Dr. R. M. Funkhouser, of St. Louis, is unable to be here on account of sickness. The next gentleman I shall call on has had a very liberal training in the arts and sciences and has succeeded most excellently as a surgeon, but I am afraid his early education was slightly neglected in that he doesn't know just what makes one horse win a race and another one fail. But in justice to him I must say that he knows a man when he sees one. I will call on Dr. Jabez N. Jackson of Kansas City, who will respond to the toast, "Dr. McAlester, a Sportsman." (Applause.)

Dr. Jackson: Mr. Toastmaster, Honored Guests and Ladies and Gentlemen: Despite somewhat unfavorable circumstances I have journeyed today to this Athens of Missouri to join with you, his neighbors, and with representatives of the State of Missouri and neighboring states, in paying tribute and homage to a great man and a great physician.

A few months ago, in Kansas City, I purchased a new home. There was one thing that largely moved me in its selection, and that was the existence upon the lawn where the house stands of two magnificently large trees, one an elm standing just to the east corner of the house, over 200 years of age with a spread of 150 feet of bough—a magnificent patriarch of the forest. It occurred to me that in the days of the primeval forest from which this tree sprang many other trees existed with equal opportunities for development, the same earth offering sustenance, the same sun shining, the same breezes to blow and the same rains to fall, the same obstacles and the same advantages, and yet of them all this tree alone has stood the test of time and has developed into the giant of beauty and strength it is today.

And so in the forests of the human kind there are those individuals possessing no obvious advantage or superior attainments, but somehow, within themselves, there is a stern force that enables them to stand out and above those with whom they are associated in the human life.

As the son of a doctor it became my privilege to become acquainted with many men of this chosen profession. About ten years ago I had the sad duty or privilege, at the funeral ceremony of Dr. John M. Allen, of Liberty, to pay my tribute. Four years ago, I had the great privilege of celebrating the fiftieth anniversary of my friend, Dr. Lester Hall, in Kansas City. And now on this occasion it gives me pleasure to pay tribute to my warm friend, Dr. McAlester, whom we all love. (Applause.)

I am very much pleased, too, that the Toastmaster has apologized for my ignorance on the subject of the "sport of kings." There was a brief period in

my history when I thought I knew something about it. A few years ago, before the late-lamented Joseph Folk wiped horse racing out of Missouri, we had a track at Kansas City known as Elm Ridge. On the first day we had the Derby. I stood and watched at the gates of the paddocks and sized up the horses as they came out, and on the card I noted my selections of those I thought would win. I picked four winners and in the Derby I picked the first three, except the first ran third, and I came to the conclusion that, after all, I had possibly inherited from contact with Dr. McAlester an innate knowledge of the real merit of horseflesh. (Applause.)

On this occasion, however, I hesitated to back my judgment with any filthy lucre but within a week after this demonstration of my skill as a judge I thought I'd win some money. But, alas, when I put my coin on the horses, none of them ever came in! (Laughter.)

But, after all, there is a significance in measuring the success of Dr. McAlester in his position here and the fact that he was a sportsman—and why? In the first place, the breeder of horses is a lover of the thoroughbred in Nature, and if Dr. McAlester has one characteristic above another it is that he likes a thoroughbred. And then the breeder attempts constantly to improve the breed. And if there is anything Dr. McAlester has done, it is that his whole life has been characterized by an unceasing effort not only to reach the best in his profession but, recognizing its limitations, to recognize its possibilities and to strive unceasingly to improve its character. So, whether it has been at the state legislature or working in the University or with the medical society, he has been endeavoring at all times to raise the standard of the medical profession.

This illustrates one thing: That if men live long enough, the great will be recognized, and the criterion of greatness is this: not what a man can get out of this world, but what a man can put into this world. (Applause.) You, as his fellow-citizens and neighbors, know how Dr. McAlester has put his life into this community—he has come to you in the time of sickness and sorrow, you know him at the bedside, you know of his kindness and courtesy and his never-ceasing effort to serve and make happy.

Incidentally, I call your attention to what I think is one of the gems of all literary things I have read—I am a Missourian born, Missouri educated in literary subjects and in medicine, have practiced always in Missouri and expect to live and die in Missouri, and this was written by a Missourian (reading from souvenir booklet): "To have lived fully and unafraid, to have loved much—men and women and little children and whatsoever things were good and sensible; to have hated with just hatred that which was wrong and foolish; to have served for the love of serving and to one's uttermost; to have had friends and to have cherished them, to have enemies and forgiven them, to have esteemed your kind, to have despised human pretensions and yet to have valued human worth—and then to sit down in the afterglow of the years among memories that are blessed—what could be more beautiful?" (Applause.)

The Toastmaster: I will call upon another distinguished citizen of Missouri, late Dean of the Agricultural Department of the State University, to respond to the toast, "Dr. McAlester as a Man," Dr. "Jack" Waters. (Applause.)

Dr. Waters: Mr. Toastmaster, Dr. McAlester, and a small fraction of his friends: I feel that I am not exceeding my authority when on this occasion I bring to Dr. and Mrs. McAlester the greetings and congratulations of the thousands of young men who

came under his guidance and influence in the University, and the gratitude of the hundreds of men and women who labored in that institution, and who are under great and lasting obligations for his help. But few men at the time Dr. McAlester entered the profession had had the privilege of the broad training that he had, and he brought to this great field of activity a splendid viewpoint and vision, having had the opportunity to come under the training of men like Dr. John H. Lathrop, then president of the University, training in moral and mental philosophy, and training in the classics under Dr. Matthews, and in the natural sciences under Dr. Joseph Norwood and Dr. George C. Swallow, men eminent in their time and who would be entitled to eminence if they were living now.

When Dr. McAlester had had a few years' experience in medicine, seeing the mutilated and damaged lives in America, it became his passion to help to build up lives—to train doctors, and to help the world. The thing that he did at the end of the first year of teaching in the University, in a medical school that was founded on his recommendation, I think was more characteristic of the man than anything else I know of; he went to Europe at his own expense to learn how they practiced and taught medicine in the old country, and he brought back the new ideas and began to lay the foundation for a higher medical profession in this, a new country. Not only that time, but many other times did Dr. McAlester go to the fountain-heads of instruction, and he helped with his own means other men who were working under him and inspired others to go, to build up the standard and to keep the medical profession and the Medical Department of the University beyond the times.

I want to speak of Dr. McAlester as a many sided man who achieved distinction not only in the medical profession, but in the line of breeding splendid livestock, who became an eminent authority on agriculture and the best posted man in America at one time, and perhaps now, on the pedigree of the thoroughbred horse. He was a sane, wise counsellor of the respective presidents of the University. Dr. Pearse spoke of the critical times in the medical profession in this state and how Dr. McAlester was never appealed to in vain, and I say, in the same way, that never, in the critical periods in the development of this University, has his advice and judgment been appealed for in vain. And yet, those who knew the many-sided qualities of Dr. McAlester knew him also as a one-sided man—distinctly and definitely. I mean by that, that no one ever doubted as to which side Dr. McAlester was on. He never worked both sides of the street at once. There never was any question as to where he stood. He stood for that which was best for the University and for his country and his own community.

I speak of him as a man whose leadership has endured. The highest quality of a man's life is that his power endures to the end. The world is full of men who promised well at thirty, achieved some distinction at forty, and are forgotten at fifty. There are men who were inconspicuous in youth, who gathered strength in their manhood and who achieve greatness in old age, but there are few indeed who are conspicuous in youth, who lead in the full strength of manhood, and whose leadership is not challenged in old age. (Applause.)

Conspicuous, however, as have been Dr. McAlester's achievements in these lines, that which will stand out of his life over and above all these, and by which he will be best remembered, will be "Dr. McAlester as a Friend." (Applause.) I mean not a friend who lives in seclusion, nor the friend who sits upon a pedestal and expects men to come to him for counsel and help—nor the man "who lives in a

house by the side of the road" and serves as a friend of man, but I mean a man who walks beside the man in the road and helps him to bear his burdens. Walter Gresham, in writing, used words which I would apply to Dr. McAlester:

He could not remain in the house by the road,
And watch as the toilers go on,
Their faces beclouded with pain and with sin,
So burdened, their strength nearly gone.
He'd go to their side, and speak in good cheer,
And help them to carry their load;
And he'd smile at the man in the house by the way,
As he walked with the crowd in the road.

Out there in the road that goes by the house
Where the poet is singing his song,
He walked and he worked 'midst the heat of the day,
And helped falling brothers along.
Too busy to live in the house by the way,
Too happy for such an abode,
And his heart sang its praise to the Master of all,
Who helped him to serve in the road.

(Applause.)

Let us rise and drink this toast to "Dr. McAlester, the Friend of Man." (All present arose and drank the toast proposed.)

The Toastmaster: Ladies and Gentlemen, the hour is not yet late. We have with us some distinguished gentlemen, old friends and pupils of Dr. McAlester, whom we will call upon for short addresses. The first upon whom I shall call is Dr. Joseph W. Pryor, Dean of the University of Kentucky. Dr. Pryor, I am told, was born in Missouri, and his father was a very kindly gentleman, known well in Northeast Missouri, and was a great friend of Dr. McAlester in his struggling days, and I know the Doctor has a warm spot in his heart for an old pupil, and a man who has made good in another state. (Applause.)

Dr. Pryor: Mr. Toastmaster, Dr. McAlester, Ladies and Gentlemen: I can hardly realize that I am in dear old Columbia after an absence of forty-four years. I'm really a Missourian, though I might be called a "near-Kentuckian." I have been there thirty-nine years and married very successfully there. (Laughter and applause.) This occasion has left me no choice. I could not resist the temptation of coming to do honor to my dear old friend and teacher, Dr. McAlester. It does my heart good to see him in good health, with the prospect of many more birthdays. This is certainly my wish for you, sir. I knew when I received the invitation to attend this celebration that I had no choice, and this reminds me of "O'Shea and His Choice," by J. T. C. Noe:

"O'Shea could tell a good foxhound
Of any age or size,
And even new-born puppies by
The marks around their eyes;
He always knew which ones to keep
And which ones should be drowned,
And he was held authority
Through all the country round.

"Now Hanrahan, his neighbor, had
Three children born one day,
And in his jubilation Pat
Sent for his friend O'Shea.
'O Mike, come over here today
And bring your wife, Colleen,
I've got the finest litter that
Your eye has ever seen.'

"An hour later Mike and Pat
 Stood by the trundle bed,
 And viewed the sleeping triplets till
 O'Shea spoke up and said,
 'O Hanrahan, now lift that shade—
 Let in a bit of sun;
 There—Pat, I think if I were you
 I'd keep the middle one!"

(Laughter and applause.)

My dear Dr. McAlester, you have lived to see the marvelous changes in surgery and medicine due to the genius of Pasteur, Koch, Lister, and the many of equal distinction who followed. As you well know, the surgery of 1876 was largely that of amputation, while that of the present day has even invaded the sacred precincts of the brain and heart. You have lived to see empirical medicine merge into scientific medicine, with the triumphs of bacteriology, blood chemistry, and the roentgen-ray, in diagnosis and therapy; with laboratory facilities within the reach of all physicians, making an exact diagnosis within the possibilities. The introduction by you of laboratory methods in the medical curriculum at the University of Missouri in the early seventies, and your efforts in improved medical instruction and better preparation for the study of medicine, exerted a wide influence, extending to all parts of the United States, and you were a very important factor in the elevation of the medical profession to its present high standard. I cannot help but note with sadness that all of my old professors are gone but yourself. I had hoped to see some of the class of '76, but some I know have passed over. I can hardly realize that I am here to visit my Alma Mater; to walk over the streets of Columbia and live over some of those happy days; to see some of the friends that I remember so well and I trust they remember me; to look into the faces of some of those dear girls who so seriously interfered with my studies! (Laughter.) Had I not responded to the summons to come I would have been lacking in loyalty to Alma Mater, Zeta Phi, and to you, my honored and beloved teacher, and I am going to tell you of the loyalty of Tip Sams:

"Tip Sams had twins
 And a razor-backed sow,
 Five dogs and a mule
 And an old roan cow;
 A bone-spavined filly
 And a one-room house,
 And a little wrinkled woman
 Just as meek as a mouse.

"Old Tip raised tobacco
 And he trafficked in skins,
 For he had seven sons
 In addition to the twins.
 And every mother's son
 And the little mammy, Jude,
 Smoked a pipe all day
 And the twins both chewed.

"But Tip kept a-diggin'
 And he never lost heart,
 For the dogs hunted rabbits
 And they caught a right smart;
 And the bone-spavined filly
 And the mule pulled a plow,
 And they lived off the givin's
 Of the old roan cow
 And the acorn-fattened farrow
 Of the razor-back sow.

"But here the story closes
 Of my little romance,
 For the seven sons are sleeping
 On the battlefields of France.
 But their daddy grows tobacco
 And trafficks still in skins,
 And the little wrinkled mammy
 Has another pair of twins!"

(Prolonged laughter and applause.)

Dr. Pryor (responding): I am very much obliged, indeed. I have only tried to do what I was advised to do, if I should have anything to say—make what I had to say conform to the modern dress: short enough to be interesting, but long enough to cover the subject properly! (Continued laughter.)

The Toastmaster: You see, I am choosing humorists. I will now call on one who has the love of every man in the profession in the State of Missouri, our good friend Dr. C. Lester Hall. (Applause.)

Dr. Hall: I feel that for our dear friend whom it has been our pleasure to know for so many years, that I should say something in the way of retrospection, as I knew him. Through the years, in attending the meetings of the State Medical Association, one of the most pleasurable anticipations has been that of looking forward to meeting him there. Why is he so honored? Simply because he has a standardized character. We hear a great deal of standardizing hospitals, and all that, but over and above everything that he has ever done, that he has accomplished for this great state, is the standardization of character; the character to stand for the right in all things and upon all occasions, for the uplifting of the profession, for the amelioration of human suffering. I love him, and I commend him to every loyal Missourian. (Applause.)

The Toastmaster: Ladies and Gentlemen, we have with us from a neighboring county one whom we know as a man who stands four-square to the world. That he has talent has been abundantly demonstrated. He is known as the editor of the "Paris Mercury." (Applause.)

Mr. Tom V. Bodine: Mr. Toastmaster, Ladies and Gentlemen, Dr. and Mrs. McAlester: I am here largely by grace of the fact that Dr. McAlester and myself remain as the sole nucleus of the Democratic party in Central Missouri. (Applause.) I understand that the Doctor is eighty years old—and I am fully a hundred and fifty! (Laughter.)

From all the tributes that might be paid tonight—and which I join in from my secret heart of hearts—I though perhaps one might escape, and I want to intrude for just a few moments. I might call my talk "A Neglected Heritage," or, perhaps, "Love's Labor Lost." In the day in which Dr. McAlester grew up, attainment, achievement, self-conquest, and overcoming was that part of a man's life towards which religion and education were directed and to which every public agency was directed. The individual was at once the foundation and the superstructure of society. But somebody, somewhere, in the last twenty-five years has discovered that individual responsibility affects no more—and I am saying this for Dr. McAlester's benefit—that somehow all effort must be collective effort. As a result we have "social reform" and nostrums and a tendency towards quackery to which my friend has ever been opposed in his heart—in medicine, in politics, in religion, in science, in the accumulation of wealth and in self-achievement of every kind. Wherever we turn we have short-cuts. The boy these days thinks the tedium of the old effort is not worth while. He gets an automatic and holds up a train or a citizen. The girl can't get exactly what she thinks she ought to have—the old tedium does not appeal to her, and she takes her typewriter in hand and

goes to the city and the next we hear of her she is gathering primroses along the highways there. We have short-cuts in education and in religion. We have short-cuts to culture. You can get "culture" any time now, within a fortnight, through a correspondence school. You can become an accomplished speaker in two hours by reading a little advertisement here that I have cut out. Understand, I didn't take the course. (Laughter.) On the other side, I find that equally marvelous things can be accomplished if you take "nuxated iron!" (Laughter.) We have short-cuts to religion, and, I might add, short-cuts to heaven. The personal touch has been lost. I can give my money—five dollars, ten dollars—and escape all personal responsibility and be canonized without effort.

The little message I have to bring tonight is that while I am not an out and out reactionary, I do remind you we should all recognize the debt we owe to an elder day. I do believe the modern generation needs to be impressed with the fact that the easiest way and the short-cuts get us nowhere; and, Dr. McAlester, in conclusion, I want to say, like Jeremiah of old, "You know, Lord, I don't want to say these things, but these people ought to be told about it and it devolves on me to tell them." (Applause.)

The Toastmaster: We have with us this evening a gentleman from Oklahoma, formerly a student in the University, and the worst thing I've heard about him today is that he was a classmate of Sneed and Robinson over there. I will call on Dr. Horace Reed, of Oklahoma City. (Applause.)

Dr. Reed: Honored Guest, Ladies and Gentlemen: I am not an after dinner speaker with whom apt and happy expressions merely await utterance, hence I can do but little more than simply pay my humble respects to our honored guest, my good and true friend. Before I studied medicine I read about the good Doctor of Drumtochty. When I came to this place, I met the Dean of the medical school and he looked very much like my mental picture of the good Doctor of Drumtochty, Dr. McClure; and as I grew to know him better I was sure that he not only looked like him, but that he acted like him. And now as the years have passed I am more sure than ever. I have thought of him in trying to do my duty in life, as I go through. The influence of Dr. McAlester upon the lives and practice of all who came in contact with him has been of the very best. I count it a privilege to be here this evening and to tell Dr. McAlester before you who have gathered here that I love him for the high ideals which he has set up in our profession. I do not mean any disrespect to my parents, but, somehow, it took a man like Dr. McAlester to touch the deeper current within me, and set it going strongly. I am glad to have known him and to have come under his tutelage. (Applause.)

The Toastmaster: You have heard at least one speaker refer to the part that Dr. McAlester is taking in what we might call "the new legislation," that is, the health commissioner in each county; that is, under the control of the State Board of Health. We have with us the president of the State Board of Health, and I now call on him—Dr. W. A. Clark, of Jefferson City. (Applause.)

Dr. Clark: Mr. Toastmaster, Honored Guests, Ladies and Gentlemen: I thought I was secure. I had noticed that speakers had been chosen from the crowd above me and I figured that we people who sat over here (indicating) were out of the line of fire. However, I have been wondering if this occasion doesn't give a peculiar feeling to Dr. McAlester. We have been coming to see him for a long time, but this is the first time that I can

remember that I have seen a bunch of doctors coming to him who didn't want something! (Laughter.) During the years we have been trying to do something for medicine in Missouri, we have had his advice, and usually when we have had a bill in the legislature that we wanted put through, or somebody else had something we didn't want to get through, he was always in those emergencies a tower of strength.

We of the younger generation know something about what Dr. McAlester did in the earlier days. We sometimes think that we have rather hard times ourselves—and we do have some disappointments and quite a number of things are not just what we would like for them to be, but they are small compared to the initiation of the things which now obtain, and which initiation came about through the good Doctor whom we honor this evening. These things did not come without hard struggle and Dr. McAlester was always in the midst of it. One way he got in reminds me of the Arkansas hill-billy who was sitting out in front of his cabin, engaged in the distinctively American pastime of chewing tobacco and basking in the sun. Suddenly he was startled from the half reverie into which he had fallen by a neighbor who rushed up and told him his wife had been attacked by a bear at the edge of the clearing and needed help to rescue her. But this son of the South, instead of being alarmed, quietly took another chew and tilted his chair back against the wall and said, "Wall, neighbor, I call'tate that thar b'ar got into that trouble on his own account!" (Laughter.)

Now Dr. McAlester got into a good many scraps on his own account. (Laughter.) But, in another way he got in because the rest of us pushed him in. He has been in all of them from the time of the organization of the medical fraternity in Missouri.

While I would like to pay a personal tribute of my own love and respect, I will merely say this: That on behalf of the Cole County branch of the medical profession, which I represent, we pay our loving tribute to the man, and acknowledge the debt that we owe him—a man who never forsook a friend, who never avoided an enemy—one whom we honestly consider, without flattery, to be "that noblest work of God—a Man." (Applause.)

The Toastmaster: We also have with us the president of the State Medical Association. He is a handsome gentleman and very amiable, but I am not going to call on him for a speech—I refer to Dr. W. J. Ferguson, of Sedalia. Also, we have the secretary of the State Medical Association, too, and he would speak if I would call on him, but it is now 11:26 and the train goes at 12.

(Guests who were to leave on the special train now retired.)

The Toastmaster: It now gives me pleasure to call upon one of the distinguished ladies present. Since the women have come into prominence politically they certainly should be recognized in every great gathering, especially one such as this. I therefore call upon Mrs. Louella St. Clair-Moss. (Applause.)

Mrs. St. Clair-Moss: Mr. Toastmaster, Dr. and Mrs. McAlester, and friends who are here for this beautiful occasion: An American writer of verse in describing the home-coming of a family of an old father in Israel has the old man say: "Meetings like this are rare this side of heaven." I think meetings of this kind are rare in Columbia because Columbia is in the land of tomorrow. We live in the land of youth—fun-loving, perennial youth. It is not often that we have tried to take the backward look and mingle a little while as we do tonight, in the land of yesterday. It is the golden day of yesterday, which we have heard spoken of so beautifully to-

night, by speaker after speaker. I am reminded of the poem written by Longfellow at the fiftieth reunion of the old class at Bowdoin College:

"But why, you ask me, should this tale be told
To men grown old, or who are growing old?
It is too late! Ah, nothing is too late
Till the tired heart shall cease to palpitate."

And he reminds us that Cato learned Greek at eighty; that "Chaucer, at Woodstock with the nightingales, at sixty wrote the Canterbury Tales; Goethe at Weimar, toiling to the last, completed Faust when eighty years were past." And then he says:

"And as the evening twilight fades away
The sky is filled with stars, invisible by day."

And so the stars are shining tonight in the sky for our dear Dr. McAlester. (Applause.)

I wish it were possible for me to speak a word for one who is not here tonight—one who was a colleague, who also went over that hard road in the early days when the medical college was expected to "make bricks without straw." Very recently, in St. Louis, there was held a banquet, and they said it was in honor of "an invisible guest." Dear friends, there are always invisible guests at every banquet table. They linger near us because they love the scenes they have so lately been a part of. But I cannot speak of all that tonight. I could have sent, as we all might have sent if we had a check book and the bank had sent us a pressing invitation to call soon, we might have sent the distinguished and honored guest beautiful flowers from the hot house, but one guest went to the garden and brought just a little nosegay for the Guest of Honor.

"To thee the years have brought their rich reward,
A name untarnished and a fair renown;
The fealty of friends, which, like a guard,
Surrounds this festal board. Both town and gown
Unite to pay thee homage!

"The world calls men to tasks both high and low,
To field and forge, to mart and strife of brain.
Her noblest sons she sets apart to go
Where suffering calls, to ministry of pain.
The world has paid thee homage!

"Oh, Friend-Physician of a thousand homes!
Whose fourscore years are like a wondrous tale;
Thy good deeds shine as sunset gilds the domes
Of some fair city in a magic vale.
'Tis meet we pay thee homage!

"What boots it that a man gain wealth or fame,
If he lose that for which men fight and die,
Love, loyalty of friends, an honored name;
Treasures are these forever and for aye.
Thus Life has paid thee homage!—Dr. McAlester."

(Applause.)

The Toastmaster: On the list before me, I see the name of one of Missouri's famous educators, who has given his life to the education of our youth—Dr. John R. Kirk, president of the Teachers' College at Kirksville.

Mr. William Anderson: He had to leave on the special train.

The Toastmaster: Well, I am looking right at a gentleman now who didn't leave on the train. I will say for him that he is a stayer, and a good one—I know him—Dr. J. C. Lyter, of St. Louis. (Applause.)

Dr. Lyter: This is quite a surprise to me. I

have listened with great interest to the discussions of Dr. McAlester as a man, as a sportsman, as a teacher. I am a Missourian by adoption—unlike my elderly friend who is a Kentuckian by adoption. He went from Missouri to Kentucky, and I from Kentucky to Missouri. I see, by looking over the souvenir booklet, that Dr. McAlester's mother was from Virginia, his father from Kentucky, and he, himself, was born in Missouri. What could be better? And, on top of all, he's a Democrat! (Applause.)

I want to speak first of my appreciation of Dr. McAlester, and then of a prophecy, as one of his students. Dr. McAlester appealed to me in my younger days and has appealed to me through all the years I have known him, particularly because of his simplicity and his kindness. If Mrs. Lyter were here, she would tell you that he is the ideal by which I have lived in trying to establish a medical career. I think I have certainly made a better husband and a better physician, and, I know, a better American citizen, because of his influence. That would be my appreciation of Dr. McAlester.

My prophecy for him would be the fulfillment of what he has longed for through the years, even before I knew him. I know he has longed to see Columbia the seat of a state hospital built and maintained by the citizens of Missouri where the poor of the state may obtain skilled treatment, and which would at the same time serve as a teaching institution. Then Missouri University may have what really belongs to her—a four years' medical course. (Applause.) That is Dr. McAlester's vision, ladies and gentlemen, and as one of the alumni of the University I can pledge that the "old grads" will see that thing accomplished if we have to live beyond eighty years of age to see it done! (Applause.)

I could not help feeling a little embarrassed for Dr. McAlester as I sat and listened to a gentleman singing a swan song, as though his life is through with—it is not. I believe a man's career is not built before he is fifty—it is a process of daily thinking and working throughout life, and it does not stop when death comes. The hospital of which I speak will eventually be complete. No legislature and no governor can prevent it, and over the entrance I want to see emblazoned "The McAlester Memorial Hospital." (Applause.)

His work upon earth will not be completed when he passes into the tower so beautifully described by Dr. Pearse, of Kansas City. His influence will live for years and years and will never die. I do not believe that a man stops working when he stops living in this world; if it were true that man of vision would not have said:

"When life's last picture is painted,
And the tubes are twisted and dried,
When the oldest color has faded
And the youngest critic has died;
We shall rest, and faith we shall need it,
Lie down for an aeon or two,
Till the Master of all good workmen,
Puts us to work, anew."

(Applause.)

The Toastmaster: Ladies and Gentlemen: Locally we have been much interested, together with Dr. McAlester, in the consummation of an ideal we have long had in view, the building of a county hospital. I see in the audience tonight the secretary of the board of hospital trustees, and I wish to say for this board that the members have labored zealously and soon we will have a hospital that will be a credit not only to the county but to the state. I will call on Mr. N. T. Gentry. (Applause.)

Mr. Gentry: Mr. Toastmaster, Dr. and Mrs. Mc-

Alester, and Ladies and Gentlemen: Our good friend from Monroe County said something about politics. As one of the opposite political faith, I am going to tell of something that happened in 1888, and perhaps he can get some consolation from it. During that year, our friend Dr. William Benjamin Smith lived in Columbia and he delivered an address on the tariff. It was such a good exposition of Democratic doctrine that the National Democratic Committee had the address printed and sent copies all over the country. A few weeks later there was a Republican landslide. I saw Dr. Smith and asked him how he felt. He replied, "I feel like Lazarus—I've been licked by the dogs!" (Laughter.)

As one of Dr. McAlester's old students at the Missouri University, I, too, enjoy this occasion and take pleasure in extending a greeting to him. He was the first person to get me interested in hospitals. It was in 1899 that he called a meeting of the citizens of Columbia and the meeting was held in the county courtroom of the old courthouse. Like a good many other people, I believed a hospital was a good institution for a place like St. Louis, and perhaps a good thing for Kansas City, but I never dreamed that one was needed in a town like Columbia. At that meeting Dr. McAlester told us that we ought to have a hospital in every county in the state, and that it would help the patients more than it would help the physicians. It was through the influence of Dr. McAlester and one of his early pupils, the late Dr. M. D. Lewis, that our good friend, Mr. William L. Parker, of Columbia, made that princely gift that established the Parker Memorial Hospital on the University campus. It was largely through the influence of Dr. McAlester that the Missouri legislature was induced to pass the act of 1917, which provides a way by which every county in the state may have a county hospital. It was largely through the influence of Dr. McAlester that the proposition was submitted to the voters of Boone County to issue one hundred thousand dollars in bonds to erect and equip the Boone County Hospital, and largely through his influence that this proposition carried by a vote of two and a half to one. And when it was ascertained that seventy-five thousand dollars more was needed to finish the work, it was largely through his influence that that proposition carried by a vote of three and one-half to one. And I am proud to say that the proposition carried in the City of Columbia by a vote of twenty-five to one, and this, too, before the women were given the ballot. If women could have voted then, there is no telling what the majority would have been—maybe twenty-five hundred to one! (Applause.) During one of those campaigns our friend Stockton Fountain, of Centralia township, said that he did not know much about a county hospital but that Dr. McAlester said we needed one and this was sufficient to cause him to work for it and vote for it. It was largely through the influence of Dr. McAlester that the county hospital building was located on the Tandy ground, on the Cross-State Highway. And today, as I stood on the roof out there, on the beautiful hill on East Broadway, I realized that the county hospital is going to be a monument to the wisdom and foresight of the people of Boone County, and also a monument to the untiring efforts of Dr. McAlester. (Applause.)

On this eightieth anniversary of the birth of our honored and deservedly honored friend, I am sure that every one will agree with me when I say that we hope he will not only be spared to many days of pleasure and usefulness in this community, but that, like that noted flower of old Mexico, he will bloom at the century mark! (Applause.)

The Toastmaster: I see a number of others from whom we would like to hear. I will call on a dis-

tinguished citizen of Columbia, one whom we all know and love—Mr. W. T. Anderson. (Applause.)

Mr. Anderson: Mr. Toastmaster, I have heard a good deal from the noted doctors of the country, but they don't go back to ancient history. Dr. McAlester has been my friend for seventy long years. I have traveled over the rough and rugged roads with him, and I want to say to you tonight that he was born in Boone County, raised in Boone County, and he comes from a historic town—the little City of Rocheport, fourteen miles west of here. It was there that Daniel Boone came across the line and Lewis and Clark when hunting for the Pacific Ocean camped there. The rattlesnakes ran them all out of the country, and Dr. McAlester came to Columbia. (Laughter.) There is no word that man can say too good for Dr. A. W. McAlester. (Applause.) I knew his father and I knew his good mother. As little fellows, when we would be hungry and would go to her home, she would spread butter on the light bread and put on a thick coat of preserves for Andrew and me. She was a good, Christian noblewoman, and he had a good father.

Dr. McAlester has traveled the rough and rugged roads of this county, over hills and through hollows, waiting on the sick and the afflicted, the rich and the poor alike. There was no distinction made. He did that which he thought was the right thing to do. No storm, nor hail nor snow ever stopped him from going to see the sick when called. And that wasn't all. Dr. McAlester is the most unselfish man I ever knew. He has given his services freely and willingly. The very touch of his finger on the forehead of a fever-stricken child seemed to be the touch of healing. His character is unimpeachable. His reputation does not stop within the confines of Missouri, nor even in the United States of America. His record is in foreign lands. We love Dr. McAlester as a brother and as a friend. He is true and noble in all his works and the world is much better because he has lived, and God be with him when he, as must we all, passes out of this life into the better clime. I say, "Doctor, God bless you and be with you, and may the holy angels bear you away when the time comes, on their snowy, white wings." (Applause.)

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The Toastmaster: We will now have the presentation of the scroll, upon which the names of the three hundred and more persons present are inscribed. Dr. C. M. Sneed, president of the Boone County Medical Association, will make the presentation.

Dr. Sneed: Mr. Toastmaster, Dr. and Mrs. McAlester: As a representative of the medical profession, and of the citizens here assembled, I here present to you, Dr. McAlester, a slight token of love and affection. As indicated by this scroll, only a very small percentage of your legion of friends are here represented. As students, we loved you for your simplicity, your gentleness, your scholarship, and your friendship at all times. Never did a student have a teacher more deserving of honor. I join with Dr. Reed and Dr. Nifong in saying that it was a great privilege and pleasure to have sat at your feet and to have learned the lessons that you taught of the lofty ideals of the profession and our responsibility to mankind. We pray and trust that many years may be spared to your life here. I now present this scroll to you, on behalf of our Society. (Applause.)

THE SCROLL

"Dr. Andrew Walker McAlester, on the celebration of his eightieth birthday.

"Dear Friend: For many years you have occupied a place of usefulness and prominence in this community and in the state. You have been an in-

spiring friend, as well as a good physician to the afflicted. Through your many faithful students, your healing touch has blessed the lives of thousands of other sufferers. Your ideals of service and unselfishness have endeared you to a host of people in all walks of life.

"Because of all these manifestations of the strength and uprightness of your character, and because it is an honor due one who is still scattering showers of blessings, as he pursues his upward way past his eightieth milestone, we do sincerely and lovingly subscribe our names.

"Presented by the Boone County Medical Society to Dr. McAlester; born January 1st, 1841—15th day of February, 1921, at a banquet given in his honor in the Daniel Boone Tavern, Columbia, Missouri."

The signatures of the more than three hundred friends present were affixed to the scroll.

The guests stood and applauded as the Guest of Honor arose.

Dr. McAlester: Mr. Toastmaster, Ladies and Gentlemen: Of the Boone County Medical Association I alone am left of the charter members. You have been my fellow practitioners and I am trying to convey to each and every one of you an expression that I really appreciate the compliment that you have bestowed upon me. As it comes from those with whom I have been associated in these eighty years, from my boyhood and in manhood, it is pleasing, at this period of life, but as I feel the sands of time roll from under my feet it is especially pleasing.

I recognize here many who have fed and clothed me. I freely admit the debt. This manifestation of good fellowship and love freely given brings joy to my heart and memories golden. I knew this town when it was less than a thousand, and I know it today with all of its beauty by nature made ornate by cultured brain. I was born the day that the University sprang into existence. Its existence stands out as a memorial to our fathers and mothers. Always am I ready to say that the founding of this University was inspired. I have enjoyed its beneficence. Yes, and our citizens are its trustees. It is bequeathed to us by the most munificent and beneficent government under the sun. It was bequeathed in order that when you entered the great constellation of states your minds should be so trained that you might do your part in the preservation of good government. That Jefferson was right goes without question. He looked backwards only to avoid the rocks that wrecked former republics. Hence he founded state universities—the crowning of our school system that has made America great. Its motto is "Peace on earth and good will to men." It moves men by the hope of reward more than by the fear of punishment. It appeals to the immortal part of men, the soul that God implanted. It permits men to raise the highest ideals; yes, when once approached, to raise them higher and higher.

I am not so vain or so presumptuous that I take this compliment all to myself. No man stands alone. Especially so in medicine. You receive the con-

sensus of the opinions and thoughts of others all along. But I do surely feel complimented that through me as a member of the medical profession you have shown your appreciation, your love, respect and confidence in the profession which saves human beings. (Applause.)

"Let Fate do her worst; there are relics of joy,
Bright dreams of the past, which she cannot destroy;
Which come in the nighttime of sorrow and care
And bring back the features that joy used to wear.
"Long, long be my heart with such memories fill'd!
Like the vase in which roses have once been dis-
till'd—

You may break, you may shatter the vase if you will,
But the scent of the roses will hang round it still."

(Applause.)

The Toastmaster: Ladies and Gentlemen, this concludes this most happy and momentous event. I thank you.

(The guests arose and sang "Auld Lang Syne" and then departed.)

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR
ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.

MISSOURI STATE MEDICAL ASSOCIATION 64TH ANNUAL MEETING

The 64th annual meeting of the Association convenes at St. Joseph, Tuesday, Wednesday, Thursday, May 24-25-26. All meetings will be held in the Robidoux Hotel. The program follows:

PROGRAM

HOUSE OF DELEGATES

FIRST DAY—TUESDAY, MAY 24, 1921—9:30 A. M.
BLUE ROOM—HOTEL ROBIDOUX

Roll Call.
Reading of Minutes of Previous Meeting.
Reading of President's Message and Recommendations.
Report of Committee on Arrangements.
Report of Secretary.
Report of Treasurer.
Report of Committee on Scientific Work.
Report of Committee on Health and Public Instruction.
Report of Defense Committee.
Report of Committee on Medical Education.
Report of Committee on Cancer.
Report of Committee on Vaccination.
Report of Committee on Blindness.
Report of Committee on Hospitals.
Report of Committee on Constitution and By-Laws.
Report of Committee on Necrology.
Appointment of Committee on Nominations.

Recess till 3 P. M.

Report of the Council.
Report of Reference Committees.
Reading of Resolutions, Memorials, etc.
Selection of Place of Next Meeting.
Miscellaneous Business.

SECOND DAY—WEDNESDAY, MAY 25, 1921—1:30 P. M.
BLUE ROOM—HOTEL ROBIDOUX

Report of Nominating Committee.
Election of Officers.
Unfinished Business.

GENERAL MEETING

TUESDAY, MAY 24, 1921—9:30 A. M.
CRYSTAL ROOM—HOTEL ROBIDOUX

Cystitis: A Symptom or a Disease.....Clinton K. Smith, M. D., Kansas City
Carcinoma of the Bladder in the Relatively Young Adult, with Report
of Two Cases.....Neil Moore, M. D., St. Louis
Treatment of Carcinoma and Sarcoma of the Colon.....
.....Caryl Potter, M. D., St. Joseph
Clinical Manifestations of Gall-Bladder Infection with Personal Ex-
perience in Transduodenal Aspiration of the Bile Passages.....
.....H. S. McKay, M. D., and J. C. Lyter, M. D., St. Louis
Duodenal Ulcer.....H. K. Wallace, M. D., St. Joseph
Visceroptosis, with Study of 100 Cases.....Edwin Schisler, M. D., St. Louis
Psychoneurosis of War or Peace.....G. Wilse Robinson, M. D., Kansas City
A Working Knowledge of Modern Anatomy, with Lantern Slides.....
.....Marsh Pitzman, M. D., St. Louis
A Case of Cardiolyis, with Presentation of Patient.....
.....Elsworth Smith, M. D., St. Louis

GENERAL MEETING

TUESDAY, MAY 24, 1921—1:30 P. M.
CRYSTAL ROOM—HOTEL ROBIDOUX

The Application of the Wassermann Report.....Geo. Dock, M. D., St. Louis
The Necessity for Popular Medical Education and Some Methods by
Which It May Be Secured.....F. G. Nifong, M. D., Columbia
Modern Methods of Conducting Labor.....A. L. Gray, M. D., St. Joseph
Version in Selected Cases, with Lantern Slides.....
.....E. Lee Dorsett, M. D., St. Louis
External Version in Breech Presentation, with Report of Cases.....
.....R. E. Wobus, M. D., St. Louis
The Occipital Posterior Problem.....Buford Hamilton, M. D., Kansas City
Further Observations in Toxemia of Pregnancy.....
.....Geo. C. Mosher, M. D., Kansas City
Trachelorrhaphy.....R. M. Funkhouser, M. D., St. Louis
Gonorrhoea in Women.....Will J. Wills, M. D., Springfield

GENERAL MEETING

TUESDAY, MAY 24, 1921—7:30 P. M.

CRYSTAL ROOM—HOTEL ROBIDOUX

PUBLIC MEETING.

Hospitals.....H. E. Pearse, M. D., Kansas City
 Tuberculosis.....Wm. Engelbach, M. D., St. Louis

GENERAL MEETING

WEDNESDAY, MAY 25, 1921—9 A. M.

CRYSTAL ROOM—HOTEL ROBIDOUX

President's Address.....W. J. Ferguson, M. D., Sedalia
 Medical Ethics and Ideals.....N. M. Wetzel, M. D., Jameson
 Vertigo: A Symptom of Interest to the Otologist, Neurologist and
 Internist.....L. M. Sellers, M. D., Kansas City
 The Importance of Correcting Small Refractive Errors for Patients
 with Symptoms of Eye-Strain.....J. P. McCann, M. D., Warrensburg
 Ear Complications in Measles.....O. Jason Dixon, M. D., Kansas City
 A New Operation for the Cure of Spontaneous Nasal Hemorrhage.....
 Hugh Miller, M. D., Kansas City
 Types of Nasal Deformities—Illustrated.....Vilray P. Blair, M. D., St. Louis
 The Importance of Early Treatment of Epithelioma of the Orbit, with
 Lantern Slide Demonstration.....John S. Kimbrough, M. D., St. Louis
 Thermophore Treatment of Ocular Neoplasms.....
 W. E. Shahan, M. D., St. Louis

GENERAL MEETING

WEDNESDAY, MAY 25, 1921—1:30 P. M.

CRYSTAL ROOM—HOTEL ROBIDOUX

What It Concerns Every Physician to Know About the New More
 Immediate and Less Painful Method of Curing Chronic Deafness
 and Discharge from the Ear.....Robert Barclay, M. D., St. Louis
 Sarcoma of the Brain with Secondary Actinomyces Simulating
 Lethargic Encephalitis.....W. A. Clark, M. D., Jefferson City
 Atypical Toxic Goiter.....A. E. Hertzler, M. D., Kansas City
 Disturbed Pituitary Function Associated with Sphenoidal Sinus
 Abscess.....F. M. Lowe, M. D., Kansas City
 Status Lymphaticus as a Factor in Nose and Throat Surgery.....
 E. Lee Myers, M. D., St. Louis
 Scoliosis.....Archer O'Reilly, M. D., St. Louis
 The Carl Berger Operation (Interscapulothoracic), with Report of a
 Case and Lantern Slides.....F. Reder, M. D., St. Louis
 Renal Tuberculosis.....John R. Caulk, M. D., St. Louis
 Malignant Disease of Bone.....H. E. Pearse, M. D., Kansas City

GENERAL MEETING

WEDNESDAY, MAY 25, 1921—7:30 P. M.

CRYSTAL ROOM—HOTEL ROBIDOUX

General Discussion on Public Health Legislation.

To Open Discussion.....R. M. Funkhouser, M. D.,
 Chairman Committee on Health and Public Instruction.

GENERAL MEETING

THURSDAY, MAY 26, 1921—9 A. M.

CRYSTAL ROOM—HOTEL ROBIDOUX

Some Observations on the Early Diagnosis of Pulmonary Tuberculosis
Sam H. Snider, M. D., Kansas City
 What Can Be done for the Patient Suffering with Pulmonary Tuber-
 culosis.....Leo Huelsmann, M. D., Colorado Springs
 Vomiting in Infants and Babies.....Edwin Henry Schorer, M. D., Kansas City
 Modern Pediatrophics.....E. W. Saunders, M. D., St. Louis
 Hemorrhagic Diseases of the Newborn.....Damon Walthal, M. D., Kansas City
 Local Infections and Epiphysitis.....Frank D. Dickson, M. D., Kansas City
 Fallacies of the Chiropractor Claims.....John D. Seba, M. D., Bland

GENERAL MEETING

THURSDAY, MAY 26—1:30 P. M.

CRYSTAL ROOM—HOTEL ROBIDOUX

- X-Ray Study of Five Hundred Paranasal Sinus Cases.....
Rex L. Diveley, M. D., St. Joseph
- Discussion opened by Dr. Gentz Perry, St. Louis.
- Roentgen Analysis of Bone Shadows.....
Edward H. Skinner, M. D., Kansas City
- Radium Therapy in Uterine Cancer.....
Clyde O. Donaldson, M. D., Kansas City
- Discussion opened by Dr. John Kimbrough, St. Louis.
- X-Ray Therapy in Superficial Skin Lesions.....
R. L. Sutton, M. D., Kansas City
- Discussion opened by Dr. M. F. Engman, St. Louis.
- Problems in Massive Dose X-Ray Therapy: Newer Methods of Appli-
 cation and Measurement.....Edwin C. Ernst, M. D., St. Louis
- Discussion opened by Dr. O. H. McCandless, Kansas City.
- The Roentgen Rays in Chest Complications....E. H. Kessler, M. D., St. Louis
- Discussion opened by Dr. L. A. Marty, Kansas City.

THIRTEENTH ANNUAL MEETING OF MISSOURI
 SOCIETY OF MEDICAL SECRETARIES

ST. JOSEPH, WEDNESDAY, MAY 25, 1921 - 3 P. M.

BLUE ROOM—HOTEL ROBIDOUX

OFFICERS

- President.....J. D. Brummall, Salisbury
- First Vice-President.....Fred Griffin, Mexico
- Second Vice-President.....W. S. Smith, Rolla
- Secretary-Treasurer.....E. E. Brunner, Carrollton

PROGRAM

- Roll Call.
- Reading of Minutes of Previous Meeting.
- Election of Officers.
- Short Talk.....P. V. Woolley, M. D.
- Short Talk.....O. C. Gebhart, M. D.
- Discussion.
- Unfinished Business.
- New Business.
- Suggestions to the Society of Secretaries.....E. J. Goodwin, M. D.

SECRETARIES' BANQUET, ROBIDOUX HOTEL

WEDNESDAY, MAY 25, 1921—6 P. M.

- Address.....W. J. Ferguson, M. D.
- Address.....A. H. Hamel, M. D.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-fifth Meeting, Monday, Jan. 10, 1921

1. EXHIBITION OF CASES.

A. CASE OF BRAIN ABSCESS.—By DR. ERNEST SACHS.

This patient was brought into the hospital about six weeks ago with an early meningitis and the history of an old suppurating ear on the left side. He had double choked disc, rigidity of his neck, and double Kernig. Spinal fluid showed 1400 cells. There was some nystagmus and a tendency to fall to one side. Patient evidently had a brain abscess. It seemed that the abscess was cerebellar. Following out the principle laid down by MacEwen, the cerebellum was first explored. Dura was opened; cerebellum under great pressure but exploration revealed no abscess. Incision was then carried up over the temporal lobe just above the tentorium which was again explored but no abscess was found. Finally an abscess was struck in front of the ear just above the zygoma in the temporal lobe. The posterior part of the incision over the cerebellum and temporal lobe was carefully closed to prevent infection and free drainage of the abscess was established. Two weeks later the mastoid was cleaned out and the temporal lobe was drained through the mastoid wound and the drainage above the zygoma was removed. Patient has thus far made an uneventful recovery.

The two points that this case illustrates are: First, that in treating a meningitis the necessary thing is to remove the local focus of infection and not to attempt to do anything to the infection of the meninges, just as a local focus is drained in a peritonitis and the peritoneum is permitted to take care of the infection of the peritoneal cavity. The other point which this case emphasizes is that it is desirable to explore a brain for a brain abscess through a clean field and not through a dirty mastoid wound.

B. EXCISION OF LEFT LOWER LOBE OF LUNG FOR BRONCHIECTASIS.— By DR. EVARTS A. GRAHAM.

Male, age 17, admitted to Barnes Hospital November 1, 1920.

Complaints of profuse expectoration of foul-smelling sputum. Present illness dates from age of two years since when he has always had cough. The most profuse expectoration has been present for only the last two years. Recently he has expectorated about one pint of purulent sputum per day. He has learned to empty himself of his sputum by stooping over and beginning to cough and allowing the sputum to run out with his head lowered. This procedure gives considerable relief from expectoration for a number of hours. The sputum and the breath have been so offensive that for several years he has been unable to obtain employment. A diagnosis of bronchiectasis involving chiefly the left lower lobe was made by Dr. Singer two years ago. He has tried a year in Colorado without benefit. About six months ago an artificial pneumothorax was made on the left side by Dr. Sale. This has given no benefit; in fact, patient has noticed that he has had a considerable amount of pain in his left side since that time, although previously he had no pain. The amount of sputum has not diminished. Repeated examinations of tubercle bacilli have been negative. Wassermann also negative. Leucocytes 9,580. Hemoglobin, 90 per cent. Rbc 5,040,000. Patient desires radical operation preferring to take any

chance in the hope of recovery. This view is strongly concurred in by the family who, because of the offensive odor, find it difficult to live with the patient.

On November 6th, about five inches of each of the seventh, eighth and ninth left ribs were resected between the angles and the mammary line. The intercostal bundles were excised. Skin then closed with silk worm and silk.

On November 22d, the flap was turned up with the idea of carrying out at that time a lobectomy of left lower lobe. After opening the pleura, numerous adhesions were found between left lower lobe and pericardium, diaphragm and chest wall. After breaking up these adhesions and freeing the lobe considerable respiratory difficulty occurred because the upper lobe was not adherent to the chest wall and the mediastinum was not stabilized by adhesions. Operation therefore terminated by packing in gauze around the freed lower lobe for the purpose of excluding the pleural cavity as a whole and of promoting adhesions between the upper lobe and the chest wall. Following this procedure as is usual there was an infection of the wound which manifested itself on the second day by an elevation of temperature to 101. This temperature continued and slightly increased until on November 28th the gauze packing was removed followed by no evidence of respiratory embarrassment and instillations of Dakin solution were begun. The temperature promptly came down to normal and a very marked improvement in the patient's condition was noted. The amount of sputum diminished materially and its foul odor disappeared.

On December 31st, the old incision was reopened and two more ribs immediately above the incision were removed for a distance of about four inches. The lower lobe which was somewhat shrunken and purple in color had become adherent again to pericardium, diaphragm and thoracic wall. Some of these adhesions had to be cut but most of them separated easily. The separation between the upper and middle lobes was easy. Lobe resected at hilus and patient returned to bed in good condition.

On the tenth day following the resection the patient for the first time developed evidence of bronchial fistula. His subsequent course has been progressively better and the space formerly occupied by the left lower lobe has become nearly obliterated spontaneously. He still has bronchial fistula which is diminishing in size. He is practically free from sputum, is gaining weight and feels very much improved.

This successful result of the operation should practically insure the patient of a complete and satisfactory recovery from an otherwise hopelessly progressive, loathsome disease. We feel that the performance of the operation in three stages has been an important thing in making it safe. These patients always are poor risks for important operations and especially for general anesthesia. In this case we performed the operations under nitrous-oxide anesthesia with positive pressure which allowed us to guard against any sudden respiratory collapse which might take place.

There have been comparatively few of these operations which have been reported in the surgical literature, and they have been accompanied by a relatively high mortality, approximately thirty to forty per cent.

DISCUSSION

Dr. Opie: What will happen to the exposed bronchus?

Dr. Graham: Before replying directly to the question raised by Dr. Opie, I would like to state something more about the operation. It is very difficult in all cases to deal with the bronchus satisfactorily. Several methods have been devised for closing the

bronchus which look very nice on paper but which do not always work out in a satisfactory manner. One of these, for example, is the method of closure devised by Dr. Willy Meyer which consists of treating the stump of the bronchus very much like an appendix stump. The principal difficulty is caused by the fact that we are dealing with a structure which has rigid walls. When anything such as a ligature is passed around the bronchus to close it off, the portion distal to the ligature eventually sloughs off and because of the rigid walls of the bronchus proximal to the ligature it gaps wide open. Experience shows, however, that many times these fistulae will close spontaneously, probably due to contraction of scar tissue about the bronchus. In many instances also they may be closed by means of a comparatively simple plastic operation at some later period. Some of them remain open. Even if the bronchus does remain open, however, the annoyance which it causes is so slight in comparison with the condition of bronchiectasis from which the patient has usually suffered for a period of years that it creates no serious disturbance. In this particular case the bronchus remained closed for about ten days after the operation.

As regards the large cavity which this man has, a considerable diminution will take place as the result of many factors, for example, as pushing over of the other lung, crowding down of the upper lobe, pushing up of the diaphragm, and shrinkage of the chest wall. There will also of course be some filling up with granulation tissue. He will probably always have a depression in the side of the chest but later on we can hasten the healing by turning in flaps of skin to cover the granulations. There have been comparatively few of these operations performed. I do not know the exact number, but I think there are probably no more than 30 or 40 cases recorded in the literature.

C. CASE IN WHICH A CERVICAL RIB MAY BE THE CAUSE OF TINITUS.—

By DR. ANDREW B. JONES.

P. W. F., female, age 48. F. H. not important. P. H. Gastroenterostomy eight years ago. Hyperectomy six years ago. P. I. First noticed ringing or thumping in right ear at age of 26. This lasted five or six weeks. Treated by inflation. Symptoms reappeared at 40. Have been present every year since. Complains only of tinnitus. No tingling pain or unusual susceptibility of arm and hand to changes in temperature. At times the tinnitus is a very rapid whistle, at other times slower, never a continuous buzzing. Change of position, *i. e.*, pulling head downward toward right shoulder and putting right arm over head relieves patient. If patient is asleep during one of these attacks of tinnitus turning head to left with chin up causes the tinnitus to awaken her. If she rests it gets better or disappears, but if she does her housework she has it all the time.

The roots of neck are wide. There is a visible and palpable pulsation synchronous with systole of heart just above and to the inner side of right sterno-clavicular articulation. Over this is a thrill and murmur, loudest just above the sterno-clavicular joint. In tracing the subclavian and carotid artery proximally it appears that possibly the innominate does not bifurcate until quite above the articulation, or that the subclavian is pulled high up close to the common carotid making an almost right-angle turn. The latter is hardly probable as the pulse and B. P. are equal and the pulsation and size of subclavian not unusual. Pupils equal. Strength, temperature and measurements of arms are the same. No sensory findings.

Otologist Report.—Reaction of drum normal.

Laboratory findings negative. T. P. R. normal, electrocardiograms normal, X-ray bilateral. Cervical rib. No evidence of aneurysm.

D. A CASE OF CARCINOMA OF THE BREAST WITH METASTASIS OF THE BONES.—By DR. J. A. EVANS and DR. SHERWOOD MOORE.

Female, age 40. Diagnosis: cancer of breast with metastases of bones.

C. C. Tumor of breast, indigestion, pains in muscles and joints all over body.

F. H. and M. H. unimportant.

P. H. Irrelevant.

P. I. Four years ago two small lumps developed in right breast. Grew larger, united and became painful, skin became reddened over them. No blood from nipple. Rheumatism and so-called neuritis has become worse. Treated at Hot Springs with no benefit. Fifty pounds loss of weight in two years. Pains worse in back, right leg and ankle. Right leg became swollen several weeks ago.

P. E. In right breast there is a hard, irregular mass attached to skin and underlying tissue. Skin dimples on moving. Reddened mass over this area in anterior axillary line. Mass extends into right axilla in a hard line. Numerous small tender masses in left breast. Glands palpable in both axillae and in neck. *Heart.* Apical systolic murmur transmitted to axilla. Aortic murmur transmitted upward P₂++. B. P. 130/55. Abdomen, liver and spleen palpable. Mass in L. R. Q. *Extremities.* Edema of both legs most marked on right.

Laboratory Findings.—Urine, specific gravity 1020; albumin, trace. Few w. b. c. and hyalin casts. No Bence Jones protein.

Blood.—Hg. 30 per cent.; r. b. c., 685,000; w. b. c., 29,400. P. 33 per cent. L. 46.5 per cent. T. 0.5 per cent. NM 4.5 per cent. Meg. 5.5 per cent. N. R. 9 per cent. Unc. 1 per cent. Fractional: Achlorhydria. X-ray report shows extensive, diffuse and irregular mottling rarefaction of bones of arms, legs, skull and pelvis indicative of widespread metastases.

DISCUSSION

Dr. George Dock: The blood pictures we have here of course might be from some other condition, but we see the same thing where carcinomatous metastases have been demonstrated.

I would like to ask Dr. Moore about the danger of fracture in such cases. One would think the danger great on account of the rarefaction. In some diseases, with apparently no more bone change, fractures have happened from slight strain, as in turning over in bed.

Dr. Moore: Fracture is of common occurrence in metastasis of carcinoma in bone, such as in the case of the metatarsal referred to. In cases of wide dissemination the bones for some reason seem to escape fracture better than in those cases where there are single or only a few metastases. Probably this is to be explained by the formation in the involved bone of a fibrous tissue replacing the normal bone rather than epithelial cells alone.

Dr. E. A. Graham: I would like to ask Dr. Moore if his experience could confirm the spectacular results which Dr. Pfahler of Philadelphia reported, two or three years ago in connection with the use of X-ray therapy in cases of carcinomatous metastasis of bones. In this report Dr. Pfahler described cases in which, judging from an X-ray examination, the metastasis in the bones had entirely disappeared as a result of X-ray therapy.

Dr. Moore: Replying to Dr. Graham's question, I have had experience with only one other similar

case. Under X-ray treatment the patient did very well during the time she was under observation, but there was no disappearance of the areas of absorption in the bone. Pfahler has had remarkable results with X-ray treatment in this class of cases, and I believe his claims to be completely substantiated.

E. DEMONSTRATION OF SKIN GRAFT TO MIDDLE EAR, EUSTACHIAN ORIFICE AND CHISELED SURFACE OF MASTOID.—By DR. M. F. ARBUCKLE.

Mrs. H. D., age 21 years, was first seen November 18, 1919, for discharging right ear in which hearing was quite defective. History of total deafness in left ear existing since age of four years; total facial paralysis on that side. History of mastoid abscess which ruptured spontaneously and was not operated. Total atresia of the left external meatus; septum of bone covered by skin graft closing canal. Bone perception still present in left ear; air perception absent.

After two attempts to keep canal open it was decided on May 29, 1920, to do a skin graft to the flap and the whole of the middle ear closing the eustachian orifice and the chiseled surface of the mastoid. It was done by placing a Thiersch skin graft in the desired position where it was held by a small balloon, which was inserted through the new meatus and left in position for five days.

When the balloon was removed her hearing was ten feet for the whispered voice. No further treatment to this ear was administered. Her hearing probably is not quite so good just now, but I think she still uses this ear for telephone conversation.

I am indebted to Dr. Farris N. Smith of Michigan for suggesting the balloon to hold the skin graft in position.

F. A CASE OF ACUTE INFECTIOUS ENDOCARDITIS.—By DR. E. W. A. OCHSNER.

Female; white; age 26; occupation, none. Entered hospital January 1, 1921, complaining of pain in joints, principally the lower extremities, shortness of breath, loss of weight, fever and sweats. P. H. is negative except for tonsillitis at the age of eighteen.

P. I. began twelve weeks ago with headaches, afternoon rise in temperature, pain in legs, and weakness. Has lost considerable weight. Night sweats began in October. In November, 1920, gnawing pain left side, now in right side. At times pain very severe.

Physical Examination.—Emaciated, very anemic, breathing rapid. Coughs frequently. Lungs negative. Area, cardiac dullness extends 11.5 centimeters to left in fifth intercostal space, and 4.5 centimeters to right in fourth. Presystolic thrill over precordium. Systolic and prestolic murmur left third intercostal space. Pulse collapsing, Corrigan type. Blood pressure 95/45. Spleen extends to level of umbilicus and para sternal line.

Laboratory Findings.—Blood: red blood cells, 3,440,000; white blood cells, 10,800—11,750—20,650—2,600—37,600.

Urine.—Negative except for trace of albumin; no red blood cells.

Blood Cultures.—Two were taken; both gave positive cultures for streptococcus viridans.

Course in Hospital.—Condition became progressively worse. Patient became weaker, developed signs of consolidation both bases and patient died today.

Autopsy showed hydropericardium; hydrothorax, bilateral; ascites (100 c.c.); bronchopneumonia, right.

Vegetations on mitral and aortic valves with mitral insufficiency and stenosis and aortic insufficiency.

Infarcts in spleen and both kidneys.

2. HYPERGLYCAEMIA IN A SERIES OF CASES SHOWING ANXIETY, FEAR, APPREHENSION, ETC.—By DR. SIDNEY I. SCHWAB and DR. A. B. JONES.

The determination of sugar curves in cases in the neurological service was begun about a year and a half ago for the purpose of finding out whether suspected cases of glandular anomalies would show characteristic curve reactions that might be used in the differentiating of one sort of internal glandular disturbance from another. It was found that in some instances where the clinical picture was obviously not that of a glandular process curves of a distinctly abnormal type were found to be present. These could not be accounted for on any other basis than that of the mental anomaly that was the persistent symptom in the case. It was then noted that cases presenting anxiety, fear, apprehension and particularly those in which the causes or origins of these conditions were suppressed or where the patient was in complete ignorance of them, a high sugar tolerance in the blood was found. A certain number of such instances were recorded and a sort of tabulation was started with the purpose of making some sort of use of these findings in diagnosis. An article by F. H. Kooy, published in *Brain*, entitled, "Hyperglycaemia in Mental Disorders" then came to our notice.

The purpose then of this paper is to study the sugar curves in a series of neuropsychiatric cases for the purpose of determining; first, the presence of hyperglycaemia; second, whether characteristic curves are found in certain types of cases; third, whether, if found, they can be used either diagnostically or prognostically; fourth, if it is likely that they may be caused by the emotional states associated with such a group of cases, and in this way excluding from causation the hypothetical role of pituitary and thyroid which have so often been regarded as the predominating factors in their occurrence.

Material.—An unselected series of such cases in which organic causes are either known or excluded, and in which there is no evidence that either the pituitary or thyroid gland was instrumental in the production of symptoms.

Method.—Benedict's method was used for the sugar estimation. A specimen of blood is taken from a fasting patient; he is then given .8 gram of glucose per pound of body weight. Blood is then taken at hourly intervals for three hours. The sugar from each of these specimens is then taken, measured in grams per c.c. of blood, and charted as a curve in comparison to a known normal. Fifty-five cases were examined in this way.

Physiological theories concerned in this work were those largely of Gaskell and Cannon—Cannon's theories of the physiology of the emotions associated with Gaskell's conception of the involuntary nervous system.

Application of these theories (Gaskell-Cannon) to clinical studies: In neuropsychiatric cases in which fear, anxiety, apprehension, worry, terror, etc., are prominent symptoms the organism is prepared according to its primitive instinctive protective mechanism to respond as a primitive organism; that is, by muscular activity in the way of concealment, flight,

or fight. Facilitating these maneuvers there occurs an increase of adrenalin with the resulting hyperglycaemia, and in some instances physical evidence, such as dilating pupils, tachycardia, etc. The hyperglycaemia remains though the individual shows none of the expected conduct reactions. These are repressed or rendered impossible by circumstances, conventions, surroundings, and the habitation of stereotyped conduct. The clinical pictures of anxiety neurosis, depression, hypochondrosis, etc., are therefore the result of emotionalism whatever their clinical characteristics may happen to be.

DISCUSSION

Dr. Olmsted: Although the psychologists are not interested in the technique of determining blood sugar and the technique of the administering of glucose, the internist and chemist are very much interested in this side of the question.

The method here used, that of Benedict, changed by Meyers and Bailey, we have reason to believe is fairly accurate. We are now in the process of checking up these methods with that of Dr. Shaffer.

A great mass of work has been done on blood sugar curves following a glucose meal, but most of it is open to serious objection, because the weight of the patient and the percentage of the solution of glucose have not been considered. We have adopted the figures of Janney, who suggested 1.75 grams of glucose per kiloweight in a 40 per cent. solution. I wish to emphasize the fact that the sugar should always be given in the same concentration. Woodruff has shown that if the same amount of glucose is given, but in various concentrations, the resulting hyperglycemia will vary with the concentration of the solution administered. Very little of the previous work has been based upon a glucose meal of definite concentration. Our rules, therefore, for the giving of a glucose meal are as follows:

1. The collection of the blood after 12 hours' starvation.

2. The administration of glucose, .8 gram per pound, in a 40 per cent. solution.

3. The collection of blood samples at 1, 2 and 3 hours after the administration of the glucose meal.

To prevent vomiting we give a portion of the fluid in the form of lemon juice.

Another point that must always be considered in this kind of work is that we do not know the rapidity of the absorption of the glucose from the alimentary canal. What figures we have are furnished by Wishart who gave sugar to animals then killed them at varying intervals and analyzed the alimentary canal for glucose. Her work showed that 60 to 80 per cent. was absorbed in two hours. Janney followed the extra glucose elimination in phloridzimized dogs and showed that about two-thirds of the glucose was eliminated within two hours after giving the glucose by mouth. But undoubtedly the absorption rate varies widely in different individuals.

As to the question of the adrenal medulla being the source of adrenalin during mental states such as Dr. Schwab has described and the extra hyperadrenalemia being the cause for the hyperglycemia, there is considerable doubt. Although, Cannon, as Dr. Schwab pointed out has upheld this statement, Stewart and Rogers have emphatically denied that any extra secretion of adrenalin takes place during an excited mental state. So the conclusion as to the mechanism of the delayed storage of glucose in these cases must wait for investigation.

Dr. P. A. Shaffer: At the recent meeting of the Physiological Society in Chicago, Drs. Stewart and Rogoff reiterated their evidence that the secretion of epinephrine into the blood is constant in dogs and is not increased as a result of nervous stimulus, and

in discussion Dr. Carlson jocosely remarked that Stewart and Rogoff must be credited with materially decreasing our knowledge—or supposed knowledge—of the physiology of the adrenal glands. Such observations prompt us to be cautious in interpreting the mechanism of emotional hyperglycaemia.

It may be of interest to recall the observations made by Folin some years ago that a number of the members of a class of medical students immediately after taking an examination had sugar in their urine—perhaps the result of an anxiety hyperglycaemia. I should like to ask Dr. Schwab whether he has controlled his observations by studying the reaction of such subjects to the repeated ingestion of large amounts of glucose *without* changing their mental state by suggestion or otherwise. Is it not possible the subjects acquired by practice rather than by change of mental state the power to absorb glucose without hyperglycaemia.

And if I may be permitted the suggestion, it is perhaps open to question whether these observations should be called hyperglycaemia. The subjects showed hyperglycaemia only for very brief periods after taking large amounts of glucose, and the phenomenon is therefore reduced glucose tolerance rather than hyperglycaemia, the latter not being associated with such conditions according to these very interesting results.

Dr. Schwab: In attempting to study a question as complicated as this one and where there are two opposing theories, both derived from the work of authoritative sources, the individual is privileged to choose that theory that seems to fit in best with his own notions and the theory upon which his work is planned. Both Dr. Cannon and those who oppose his ideas represent groups of workers that one can safely follow. I have chosen the explanation given by Cannon because it fitted best with my own conception of the problem.

In regard to the use of the term hyperglycemia, I am well aware that it is not accurate, but I wanted to add our work to the group of papers that has already appeared under this title. I appreciate the fact that hyperglycemia means an increased amount of sugar in the starvation blood, but the term hyperglycemia as it is used in this paper has become a customary one. I shall be glad to use any other term which seems to be more exact. As far as possible other causes which might produce an increase of sugar tolerance in the blood were excluded in this study, though it is possible that some factors which are unknown might have come in as complicating causes.

In presenting this resume of the work done on this series of cases, I do so somewhat apologetically, realizing that it is only an attempt to corroborate certain findings and is a suggestion toward a method of approach in the study of mental diseases in which emotionalism is a strong factor.

3. PULMONARY BOTRYOMYCOSIS, WITH REPORT OF A CASE.—By Dr. F. A. McJUNKIN.

Botryomycosis is a chronic granuloma characterized by masses of coccus-like micro-organisms imbedded in and surrounded by a hyaline matrix or capsule. The masses or "botryomycotic granules" may be one to several millimeters in size.

The disease occurs in horses especially in which animal it has often been observed as fungoid growths arising in castration wounds; infected horses have been reported in Kansas and adjoining states (Opie). In man the disease occurs most frequently as tumor-like growths on exposed skin surfaces but recently Masson observed the infection in a gunshot wound. It appears to be most prevalent in northern Africa.

In 1913 Opie reported the first instance of the disease in the United States. This remarkable case occurred in a girl 11 years old who was admitted to the St. Louis Children's Hospital, died, and came to autopsy. The liver had undergone extensive necrosis with the formation of much fibrous tissue. Although involvement of internal organs occurs in the horse it had not previously been observed in man. The present case also from the Children's Hospital is, so far as can be learned, the second one observed in the United States. Especial interest attaches to it because of its occurrence in the same community from which a previous one also with localization in an internal organ was reported.

The present case is a male infant four months of age that was well until three months old when it was admitted to the hospital with pulmonary symptoms. Although the diagnosis of broncho-pneumonia was made the case was atypical and the temperature remained low (99.2 degrees to 101 degrees) in spite of the marked process in the lungs. The child died twenty-three days after admission. The gross examination at autopsy revealed 1-cm. areas of consolidation in both lungs and a purulent bronchitis. Microscopically numerous large mononuclear leukocytes and giant cells are present in the pneumonic areas, and inclosed in some of the latter are masses of the organisms surrounded by the pink-staining hyaline. In the cultures from the lungs a coccus with the characters of staphylococcus albus was obtained.

Two views are held in regard to the organism: one that it is the usual staphylococcus pyocyaneus aureus; the other that it is a specific coccus. In the smears from the lungs of this case some of the Gram-staining cocci are surrounded by a narrow pink zone which stains positively and suggests a capsule about the individual coccus.

DISCUSSION

Dr. Opie: It is of considerable interest that staphylococcus was obtained from the lung in this case, for several writers regard the clumped organism as a variety of staphylococcus. The disease in human beings may be derived from horses. How the micro-organism has entered the body in this case is uncertain. It is noteworthy that the first instance of the disease described by Bollinger in the horse was in the lung for in Dr. McJunkin's case the disease was primary in the same organ. Several years ago the Bureau of Animal Industry had a record in their files of only one case in the horse. Dr. Horzog of Chicago had seen several instances, and Dr. A. F. Kinsley of Kansas City had seen instances from the states of Kansas, Nebraska, Iowa and the Dakotas. Dr. B. F. Knapp of Colorado had seen one instance. It seems that the condition among horses is distinctly more frequent in the West than in other parts of the country.

4. INTERNAL URETHROTOMY WITH THE AUTHOR'S INSTRUMENT. (A REPORT FROM CITY HOSPITAL UNIT NO. 1.)—By DR. H. McCLURE YOUNG.

The three cases which I wish to describe represent three distinct types of stricture at the bulbo-membraneous junction demanding internal urethrotomy. First, simple undilatable stricture; second, stricture complicated by sepsis, in this case a prostatic abscess; third, stricture complicated by fistulae but no longer markedly septic.

The instrument was presented to the profession in 1913. It consists of a grooved staff with an eye on the tip for passage over a whalebone bougie. The

olives can be slipped over the proximal end of this staff after it has been passed into the bladder, and the cutting apparatus can then be fitted into the groove of the staff and into the olive.

Case I. An uncomplicated stricture which it had been found impossible to dilate, would admit only a whalebone and this could not be retained as it caused complete retention of urine. The grooved staff was threaded over a whalebone bougie and passed with great care into the bladder. The stricture was incised with three parallel incisions using olives No. 22, 26 and 32. A retention catheter was tied in place and sound No. 27 was introduced on the fifth day.

Case II. A prostatic abscess complicated the stricture, and after internal urethrotomy it was necessary to drain the bladder through the perineum. This was done by opening the deep urethra on a sound well behind the bulbo-membraneous junction. This point in the technique is one which I wish especially to emphasize. By placing our external urethrotomy wound well back in the deep urethra we protect our patient against excessive trauma to that position of the urethra which is subject to stricture formation.

Case III presented the complication of perineal and suprapubic fistulae. He was no longer septic and the operation was performed as in Case I.

None of these cases could be dilated. Internal urethrotomy in dealing with strictures of the deep urethra is the operation of choice and can safely be performed even in the presence of considerable sepsis, provided the precaution is taken to drain the bladder as described above. We thus spare our patient the mutilating traumatism of an external urethrotomy with its sequelae of increased cicatrization, etc.

JASPER COUNTY MEDICAL SOCIETY

The twelfth meeting of the Jasper County Medical Society for the year was held at the Joplin Y. M. C. A., Tuesday, March 22, the president, Dr. Grant-ham, in the chair. The minutes of the last meeting were read and approved.

Dr. Barney Brooks of Washington University Medical School, St. Louis, delivered an address on "The Diagnosis, Etiology and Treatment of Pyogenic Osteomyelitis."

Dr. Brooks emphasized the following facts: that osteomyelitis originates from a boil or infected tonsils; that it probably does not come from the teeth, as primary osteomyelitis is found more frequently in children and they do not have alveolar abscesses; that it starts in the medullary canal, not under the periosteum; that it spreads along the medullary canal before working its way out through the bone to form a periostitis. There are two general types of onset, one starting with a chill, high fever, marked leukocytosis, patient very sick with rapid progress in the bone. The other type is slow in progress, like tuberculosis. The diagnosis should be made at the very earliest moment, long before the change can be noted with the roentgen ray. The early diagnosis should be made from fever, bone pain, a localized point of tenderness which cannot stand deep pressure and bone percussion.

Treatment consists of immediate drainage and the removal of the necrosed bone as soon as new bone starts forming.

The paper was illustrated with lantern slides and proved the most interesting one of the year.

Attendance, 51.

JAS. I. TYREE, M.D., Secretary.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., JUNE, 1921.

NUMBER 6

E. J. GOODWIN, M. D., EDITOR
3529 Pine St., St. Louis, Mo.

PUBLICATION COMMITTEE { W. H. BREUER, M. D., Chairman
S. P. CHILD, M. D.
M. A. BLISS, M. D.

ORIGINAL ARTICLES

REMOVING HEALTH DEPARTMENTS FROM POLITICS*

President's Address

W. J. FERGUSON, M.D., SEDALIA

Upon the passing of another mile stone in the history of our organization it is not only fitting, but with grateful appreciation for the honor bestowed, that an accounting of the stewardship be given.

In deference to your wishes, my services as your president for the past year I consider a distinguished privilege and one of the predominating sources of individual pleasure of my lifetime.

A privilege because it has offered an opportunity of being instrumental in the direction of this great organization made up of the flower of as noble a calling as civilization has ever produced, the rank and file of which typifies its principles in the spirit of service to humanity.

A pleasure because of the opportunity for a more extensive and intimate acquaintance and association with such men of sterling worth and purpose.

I am glad to take this occasion to acknowledge, and in so doing I am sure I bespeak the generally prevailing sentiment of sincere appreciation for the diligence of our amiable secretary, who has labored faithfully and whose trials and tribulations in the interest of our society I feel are greater than we are aware; for the prompt and courageous actions of our executive committee, the work of special committees and for the interest of the membership at large, many of whom have not hesitated, at much personal sacrifice, when the occasion has offered, to take up the cudgel in defense of the principles for which we stand.

Ours is a jealous profession, not because of things material, but because of our funda-

mental ethics and principles which have been established through the long ages of relentless labor and sacrifices in the effort to promote peace, comfort and longevity of mankind. Of that public welfare are we justly jealous and we are equally proud that those contributions have not fallen in vain upon the altar of despair, but that to a grateful civilization the appeal of wisdom, mercy, patience and science has dispelled fear, has overcome superstition, developed confidence and created demand.

In this age of rivalry and of pursuit for things material, it is gratifying to see that unabated the teachings of Hippocrates still live and that our duty as it is presented has been conscientiously performed in the mitigation of human suffering. Now we are entering upon that new era of recent years much talked of but little developed, that of preventive medicine, of interest to all, appealing to some, and I trust rejected by none, offering as it does the results of science, of research and ingenuity for preventing as far as possible the necessity for the past forms of relief.

From recent observation, it is convincing that the profession must at an early date assume more activity in this prevention in the form of public health work. The public is very fast being educated to its value and necessity and if we are to retain that confidence, we must take more than a passing interest.

We have outgrown the ancient point of view which held that "they that are whole need not a physician, but they that are sick," for we know that the maintenance of the public health is no less important and often easier than is the cure of diseases. It will probably interest you to know that the first State Department of Health in the United States was established in Massachusetts in 1869, about the time the first fruits of the labors of Pasteur and Lister were given to the world. The results obtained by this first organized department were early apparent and the example was followed by all the other states of the Union in rapid succession, the Missouri State Board of Health be-

*Read at the 64th annual meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

ing organized in 1883 acting with statutory authority, which statute though it was progressive at the time of its passage, greatly outlived its usefulness because of more recent scientific advances. In 1919 amendments were secured which more nearly meet the needs of the time, the enforcement of which marks a new era in the welfare of our state and reflects credit upon our profession. To be, and to continue being worthy of this credit, we must individually and collectively make a sincere effort in the interest of the masses by complying with and assisting to enforce our health laws and regulations. The success or failure of any public health undertaking must necessarily be placed to the credit of the medical profession. Therefore, in this day of cults and unscientific practices which are appealing to an unsuspecting public mind, it behooves us to be increasingly zealous and to have faith that truth will triumph.

In this period of reconstruction the same hand of valor exhibited by our number in the great conflict must be shown in meeting the problems now appearing upon the horizon, and our united efforts must be given for the promotion of the public welfare by:

First: Removing our departments of health from politics. Until these departments are so removed we cannot expect the most efficient and economical service. Public health work being a developed specialty, qualified men are not to be secured for the short and uncertain tenure of office at the small remuneration ordinarily offered. Consequently, the office serves as a training school for men rather than placing at the disposal of the public the services of trained personnel, which they rightfully deserve and expect.

Second: By endorsing the progressive administration of the State Board of Health and encouraging adequate appropriations for its work. During the year just closed there was expended under its supervision, federal funds amounting to \$110,000, or over five times as much as was available from state appropriations for the same period. The activities conducted were so urgent and the results so apparent that we gladly endorse this method of federal aid to states.

Third: Teaching of the fundamental principles of health as a part of the regular curriculum in our public schools and requiring that the teachers who are in charge of our children be physically as well as mentally qualified.

Fourth: Recognizing the fact that our maternal and infant mortality are unnecessarily high, and that it is the duty of the state to reduce it.

Fifth: That the building of county hospitals must be encouraged to place within

reach of all the best possible treatment and offer to the physician the opportunity to render his best service.

Sixth: We must take cognizance of and encourage with our co-operation the activities of such lay health organizations as the American Red Cross, the National Tuberculosis Association, etc., which are engaged in presenting to the public a definite program of health education and which organizations have demonstrated to the world that their only mission is the mitigation and prevention of human suffering.

Seventh: We unqualifiedly endorse and support the Missouri Public Health League, which, though born in emergency, promises to become the greatest single factor of appeal to the intelligence of the masses, making certain to them that here exists a reciprocal and unselfish interest; there is no doubt that this will result in a definite expression by the ballot for the future guidance of those who may be entrusted with the consideration of laws affecting their physical welfare. With equal emphasis do we condemn in a purely non-partisan manner the recently enacted amendment to our medical practice act which lowers our medical standards, and we appeal to each member to spare no effort in prosecuting the referendum now being submitted.

Eighth: A solidly united front to protect our profession and the welfare of the public from infamous legislation. In this way I suggest that we have unwittingly for many years allowed ourselves to take the defensive without assuming an offensive attitude. The time has arrived when fire must be fought with fire. It is necessary that our legislative interests be protected in the same manner as are those of the enemy. Means must be devised and expenditures authorized for the expense of members and the employment of competent representatives to look after medical and health legislation. For this purpose it is recommended that action be started immediately for establishing a special legislative fund either by special assessment or by raising our annual dues.

It is hoped that the foregoing recommendations which at present appear to be of vital importance will meet with your unqualified approval and that after deliberate consideration during this meeting each one will receive appropriate action.

None are more entitled to raise the standard of "the right to health" and of "the up-raising of mankind" than we physicians, and all mankind should follow.

It is our duty to take up these questions and to set them forth as they deserve on the broadest lines. By so doing we shall not only exalt the medical profession in the eyes of all, but

what is infinitely better, confer an immense benefit upon humanity.

THROMBOSIS OF THE INFERIOR VENA CAVA*

GEORGE H. HOXIE, A.M., M.D., and GEORGE H. THIELE, A.B., M.D.

KANSAS CITY, MO.

The following case is thought worthy of publication because of the fact that it gives us new light on the symptomatology of this condition and also affords us some material for differential diagnosis between the obstruction of the portal circulation and that in the vena cava. The case is remarkable also because of the fact that the patient had apparently lived several years after the onset of this condition and one cannot help questioning the diagnosis of typhoid spoken of in the history—whether it was not really the origin of the phlebitis.

We would call attention also to the dilatation of the duodenum noted in the protocol of the postmortem examination. This condition of itself may have been the cause of some of the symptoms mentioned by the patient, and in turn may have been caused by the obstructed circulation in the vena cava.

Another point of interest is the development of the collateral circulation through the superficial epigastrics.

Finally, it may be worthy of note that this patient's desire for morphin was founded on a real need, and we might draw the moral that it is not always sufficient to make a final diagnosis of morphinism if we are to understand the real condition of such patients.

Mr. D., male, aged 38, single, a truck driver, entered the Kansas City General Hospital January 4, 1921, complaining of dizziness, with black spots before the eyes.

Family History.—Both the father and mother died at ninety years of age of cause unknown. There were no brothers. There were seven sisters, all of whom to the patient's best knowledge were living and well. There were no brothers or sisters dead.

Personal History.—Present illness began gradually one week ago, and was first noticed when the patient straightened up after leaning over. The patient went to his room and sat down the remainder of the day. He slept well that night and had no pain except a bitemporal headache. Since the following day the dizziness and black spots have been very persistent regardless of position. The patient states that he was unable to walk up hill or up a flight of stairs without becoming dizzy and faint. Five days ago when the patient was in his bathroom he fell against a cactus plant and the thorns pierced and scratched the anterior belly wall, at such point that enlarged veins on the belly were pierced. Patient pulled the thorns out, but ever since that belly wall

over the veins has been red, tender and somewhat swollen in spots. Patient says that there is very severe pain in the belly wall when he coughs. Patient believes that the pain is due to the injury from the thorns.

For the past three days the appetite has been very poor and the patient has felt very weak. Yesterday and today the patient has had a cough productive of a thick white sputum with some pain on either side of the sternum on coughing. Yesterday morning the patient noticed that the tongue was coated, thick and white. The bowels have been moving at intervals of about two days. There have been no urinary disturbances. No vomiting.

Past History.—Measles and mumps in childhood. Varicose veins of the legs since 1907. Typhoid fever in 1907. Broken right leg in 1907. Rheumatism in the right knee for two weeks in 1912. Has had a varicose ulcer on the right leg since 1907. He was operated upon for varicose ulcer of the leg and varicose veins of the leg in 1916, at Glenwood Springs, Colorado. The patient denies gonorrheal or luetic infections. He states that with the exception of the above ailments, his health has been good. (This patient is poorly oriented as to time of day and day of week, and answers questions with difficulty.)

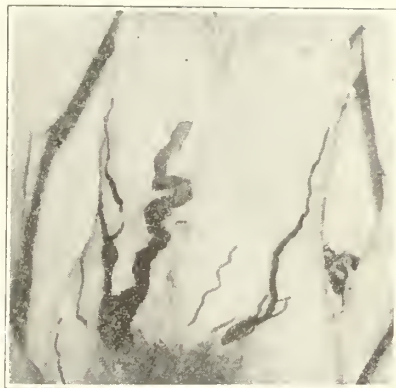


Fig. 1.—Photograph of abdomen with dilated vessels touched with tincture of iodine. (Photo by Dr. Stephens.)

Physical Examination.—The patient is a male, white, about forty years or age. Black hair and grey eyes, about five feet ten inches tall and about 125 pounds weight. He is poorly nourished and appears to be very weak. He does not appear to be especially toxic.

Head.—Scalp: Hair normal, otherwise negative. Eyes: Pupils regular and equal and react promptly to light and accommodation. The sclerae are white. The conjunctivae are normal. The eye movements are normal. Mouth and Throat: The pharynx, palatal arch and anterior tonsillar pillars are very red. The buccal mucosa is of normal color and presents no lesions. The teeth are very carious. Some of them are broken off. There is no tremor of the tongue which is coated except for the tip which is of normal color.

Neck.—Palpable cervical glands both anterior and posterior. Thyroid not palpable. No visible pulsation of the vessels of the neck.

Chest.—The skin is dry and presents numerous small scabs 1 to 2 mm. in diameter. (Probably scabies.) The musculature is very atrophic and the subcutaneous tissue is almost gone. The respirations are shallow and the expansion is subnormal. Palpation: Skin is dry but not leathery. The muscles are atrophic. Otherwise normal. Auscultation: Musical inspiratory squeaks on deep inspiration over

*From the Medical Service of the Kansas City General Hospital.

the base of the left lung posteriorly and laterally. Musical rales are heard on inspiration all over the right lung, but are more pronounced toward the base. At the right apex posteriorly one hears coarse rales which disappear on coughing.

Heart.—Percussion: The borders are normal as nearly as can be ascertained. Auscultation: The sounds are somewhat subdued but clear. There are no murmurs. There is a slight accentuation of the pulmonic second sound.

Abdomen.—There are large, red, tortuous, varicose veins extending from the right Poupert's ligament to the right hypochondriac, supra-iliac and epigastric regions. These veins appear to be acutely inflamed. There are similar but smaller varicosities on the left side of the abdomen; however these are not inflamed. Palpation: The abdominal wall is tender all over the right side. The liver is questionably palpable 1 to 2 finger-breadths below the costal margin. Spleen or other mass palpable two finger-breadths below the left costal margin. The lower abdomen is not tender except over the varicose veins.

Inguinal Regions.—There is a mass of varicose



Fig. 2.—Photograph of specimen showing the, canalized thrombus and the junction of the iliacs.

veins in each region, larger on the right side. There are probably enlarged glands present also, but the areas are so very tender that thorough palpation is impossible.

Genitalia.—There is a small non-indurated area on the glans penis, dorsal surface. This resembles an insect bite or a scratch.

Extremities.—There are varicose veins on both legs. There is an ulcer two inches in diameter on the mesial side of the right tibia at the junction of the lower and middle thirds, and scar tissue girdling this level.

Reflexes.—The knee jerks are absent. Ankle clonus and Babinski, etc., absent.

Laboratory Findings.—The urine was voided, straw color, cloudy, acid, sp. gr. 1.024, albumin negative, sugar negative, casts negative, blood negative, crystals negative.

The white blood count was 22,000. The differential count showed nine small lymphocytes, three large lymphocytes, three transitional forms, and 85 polymorphonuclear neutrophils. The blood for Wassermann was not obtained. The spinal fluid Wasser-

mann was negative, gold chloride 13343000—; Noguchi: Faint trace.

Progress Record.—January 5, 1921: The patient does not take his food. Seems very restless and complains of a great deal of pain in the abdominal wall. Is beginning to look very toxic. Later in the day the patient asked for morphin and admitted that he had used the drug habitually for several years. Morphin was given. The patient was given divided doses of calomel followed by magnesium sulphate which was vomited. Later in the evening the patient vomited large amounts of yellowish fluid. Proctoclysis of glucose 10 per cent. and soda 5 per cent. was begun.

January 6, 1921: Patient took 1,000 c.c. of the proctoclysis solution. He repeatedly vomited large amounts of greenish yellow fluid. Given milk of magnesia two ounces at two-hour intervals for four doses. In the afternoon the patient refused all medication and continued to vomit the yellowish fluid. About seven o'clock the patient got up without the nurse's knowledge and went to the bathroom and took a hot bath. He later took another hot bath and said that the first one made him feel better. About midnight the pulse was not palpable.

January 7, 1921: The patient died at 1:45 a. m.

Postmortem Protocol (Dr. Watson Campbell).—Body that of a poorly nourished man about 45 years old. He is about 5 feet 10 inches in height. Many of the teeth are absent and the others are in bad condition. The eyes are grey, the pupils being normal in size and regular. There are two irregular ulcers about the size of a quarter over the right tibia between the middle and lower thirds. The superficial veins over the abdomen are very much enlarged especially the epigastric on the right side which is about the size of the little finger. The veins of the legs are also enlarged and varicose. The postmortem rigidity is quite marked.

An incision was made from the suprasternal notch to the symphysis pubis.

Chest.—The pleural cavities contain no free fluid. The pleural surfaces are glistening and moist. The right lung has a small fibrous area with scarring at the apex. The lung is somewhat emphysematous, the crepitation being somewhat diminished in the lower lobe posteriorly. Also in this region there is a broken down abscess about the size of a marble. The left lung is negative with the exception of an old adhesion of the lower lobe mesially.

Heart.—There is a normal amount of fluid in the pericardial sac. The pericardium is negative. The heart is in systole and normal in size. The myocardium is negative. The endocardium, valves and aorta are normal.

Abdomen.—Contains no free fluid. The peritoneal surfaces have lost their luster. The blood vessels are distended and congested.

Liver.—The liver is slightly large. The capsule is smooth and strips leaving a smooth surface. When sectioned, the cut surface is somewhat mottled in appearance, the tissue being softer than normal. It gives the impression of a diffuse fatty change. The gall-bladder is not completely filled with bile and empties when pressure is applied.

Spleen.—The spleen is about twice the normal size. The capsule is smooth and tense. When sectioned, the pulp is soft and friable.

Pancreas.—Negative.

Kidneys.—Normal in size and soft and flexible. The capsule strips leaving a smooth surface. The cut edges roll out slightly and no other abnormality is noted.

Stomach.—The stomach is dilated and well filled with a yellowish fluid, there being about two quarts of the fluid. The walls are thin and transparent.

The mucosa is negative. The pylorus is relaxed and wide open.

Intestines.—The duodenum is very much dilated and filled with a yellowish fluid. The jejunum is also distended but not so much so as the duodenum. The ileum is negative. The colon is empty and contracted down until it is the size of the finger.

Bladder and Prostate.—Negative.

Veins.—The veins in the pelvis are dilated and tortuous. In the inferior vena cava from where it enters the liver down to the bifurcation and extending into the ilia, there is what appears to be an old canalized thrombus. It is filled with numerous partitions and channels.

Anatomical Diagnosis.—1. Small abscess of the lung. 2. Thrombophlebitis of the dilated right epigastric vein. 3. Dilatation of the stomach and upper portion of the small intestines. 4. Canalized thrombus of the inferior vena cava.

Cause of Death.—Thrombophlebitis.

715 Bryant Building.

ON EXTREME CYANOSIS IN PULMONARY EMPHYSEMA

ALBERT E. TAUSSIG, M.D.

ST. LOUIS

More or less cyanosis is not uncommon in pulmonary emphysema, and occasionally it is present to an extreme degree. It has sometimes seemed to me that this was more commonly the case with our Russian Jews of advanced age than with others.

Every winter we have in the wards of the Jewish Hospital a number of old emphysematic men in whom extreme cyanosis is the outstanding feature. Aside from the varying degree of bronchitis that complicates the situation, they present a fairly uniform picture. When sitting quietly, semirecumbent in bed, they appear reasonably comfortable, with little dyspnea and moderate cyanosis. Slight exertion, however, such as getting out of bed or the like, alter the situation completely. The patient goes into an attack of extreme air-hunger and his face, lips and hands become startlingly livid. After some minutes, the paroxysm subsides, the cyanosis lessens and the patient once more becomes comfortable. The pulse becomes somewhat rapid during the attack but soon returns to the normal; with most of these patients, while they have some enlargement of the right side of the heart, the pulmonary overshadow the cardiac symptoms.

Their chief functional abnormality, apparently, is the small amount of tidal air available for ventilating the lungs. The great distention of the alveoli and the accompanying inefficiency of the elastic tissue result in a relative stagnation of the air in the lungs. In advanced cases, there is only just enough air exchange to ventilate the blood when the patient is quiet; a little exertion leads to a de-

mand on the part of the blood for more air, which the lungs cannot satisfy. The result is cyanosis and dyspnea which may be extreme. In some of these cases, as in other conditions that lead to cyanosis, the blood contains an abnormally large number of red corpuscles. This erythrocytosis may attain a considerable degree and may be analogous to the changes that take place in the blood at high altitudes. In both cases we have apparently a compensatory process on the part of the body, a reaction to the insufficient aeration of the blood. The heart is usually enlarged, the right side especially being hypertrophied and dilated—and, as the following case illustrates, the pulmonary aorta may be atheromatous and greatly widened.

M. C., male, aged 60, entered the Jewish Hospital, December 15, 1914, complaining of cough and shortness of breath. The family history was negative. Beside the usual diseases of childhood, he had had only typhoid in early manhood. There was no history of alcoholism or syphilis and he had had a good deal of cough and some asthma every winter, but no serious dyspnea until a few years ago. Of late he had found himself growing increasingly short of breath on slight exertion. An intercurrent acute bronchitis led to a considerable increase in his discomfort and induced him to enter the hospital.

Physical examination revealed a somewhat battered old man, propped up in bed, sensorium clear. As long as he remained entirely quiet he seemed reasonably comfortable; lips and finger nails appeared a little cyanotic but not much so. A very little exertion, however, made him extremely dyspneic and markedly cyanotic so that he feared to make an unnecessary movement. The temporals were tortuous, pupils equal and active, teeth carious and defective, pharynx negative, jugular veins not especially prominent. The chest was somewhat barrel shape, the lungs hyperresonant with prolonged and accentuated expiratory murmur and numerous snoring and piping rales. The heart could be percussed with some difficulty but appeared enlarged laterally with sounds muffled but regular and not rapid as long as he remained quiet. The abdomen was practically negative as were also the extremities except for a high-grade arteriosclerosis. The blood pressure was 150-100 mm. Hg. The urine constantly contained a trace of albumin with few hyaline and granular casts; the blood contained 5,500,000 red cells, 8,000 white cells and 100 per cent hemoglobin. In spite of vigorous stimulation, he failed rather rapidly, became soporose and died a week after entering the hospital.

The autopsy, in brief, showed a high-grade pulmonary emphysema with many vesicles 0.5 cm. and more in diameter formed by the coalescence of lobules. The heart was considerably enlarged, especially the right ventricle. The pulmonary aorta was dilated and contained atheromatous patches, one of them large and calcified; the pulmonary arteries were sclerotic and somewhat distended. The kidney showed the usual senile changes; there was a high-grade general arteriosclerosis.

In the Osler Memorial volume, Warthin reports, in extenso, a somewhat similar, perhaps even more striking case, as one of Ayerza's disease. During life it had been diagnosed as

one of "chronic cyanosis with polycythemia (Osler-Vaquez Disease)," as his red cell count had only twice fallen below 6,000,000 and had risen as high as 9,500,000. The chief symptoms were severe attacks of cyanosis, dyspnea, headache, visual disturbances, gastrointestinal symptoms. The Wassermann reaction was strongly positive. At autopsy a great dilatation chiefly of the right side of the heart was found, extreme dilatation and atherosclerosis of the pulmonary arteries, marked pulmonary emphysema and the general concomitants of passive congestion and arteriosclerosis. Warthin calls attention to the fact that these cases of pulmonary arteriosclerosis have been reported chiefly by Spanish-American clinicians. In the tropics, it would seem they are more common than with us. They are usually syphilitic in origin. First described in 1901, by Abel Ayerza of Buenos Ayres, they have been reported in considerable number under the name of "Cardiacos Negros." Preceded by a somewhat prolonged period of chronic bronchitis with emphysema, the typical syndrome finally makes its appearance with cough, dyspnea, extreme cyanosis, hyperglobulism, headache, angina, hemoptysis, somnolence and finally death. There are apparently all gradations from the simple severe emphysema described above and the extreme form of Ayerza.

That a very similar symptom-complex can be produced by extreme emphysema without either hyperglobuly or pulmonary atheroma is illustrated by the following case:

Mrs. C. S., aged 32, first came under observation September 17, 1918, complaining of dyspnea and cyanosis on exertion. One sister had died of acute tuberculosis. The patient had gone through typhoid fever at 16 years, and mastoid infection at 18. At about 19 years, she had an attack of dry pleurisy (left) which confined her in the hospital for three weeks; for some years thereafter she had pleurodynia on that side. For many years she had had a productive cough every winter and had often been suspected of tuberculosis. Otherwise her general health had been very good until recently. She had been married two years with one abortion. There was no history of syphilis. Some ten years ago, while playing tennis, she suddenly became very dyspneic, coughed violently and spat up a tablespoonful of blood. From that time on, any violent exertion was followed by a similar paroxysm. As the years went by, the degree of exertion required to produce a paroxysm grew steadily less; three years ago she had to give up tennis, and two years ago found herself no longer able to sweep or to go upstairs rapidly. About this time, a physician administered 18 intravenous injections of salvarsan and a number of intramuscular mercurial injections. This treatment was followed by an increase rather than a relief of her symptoms. A little exertion made her gasp for breath, her lips and finger nails "turned black" as she put it, a harsh cough with bloody sputum set in. The result was that she had to move and work slowly. If she did this, she felt perfectly well and comfortable. There was never any respiratory embarrassment when quiet or at night.

When first seen, physical examination was nearly negative. The temperature was 98 degrees, pulse 80, respiration 16, weight 154½ pounds (her usual weight). The lungs were somewhat hyperresonant with prolonged and accentuated expiratory murmur but no rales. The cardiac dullness was somewhat widened extending 10 cm. to the left and 4.5 cm. to the right of the midline in the fifth interspace. Otherwise all findings were negative. The arteries were soft, the blood pressure 115 and 75 mm. The complexion was rosy, the patient was entirely comfortable and laughed and chatted cheerfully. A little exertion, going up and down a flight of stairs slowly, changed the picture completely. The patient returned to her chair with her skin almost bluish-black, with extreme air hunger and a harsh, barking cough. The pulse had risen to 120 beats per minute, the chest was full of dry wheezing rales; no other change. After a few minutes' rest, her usual pink color returned to the face and lips, her dyspnea ceased and she was soon quite comfortable again. The routine laboratory tests were all negative.

During the next six months her condition remained practically unchanged. In February, 1919, she acquired an acute bronchitis, accompanied by violent bronchial asthma, the paroxysms of which yielded readily to injections of epinephrin. After one of these paroxysms, however, permanent and extreme dyspnea and cyanosis set in, and she was taken to Barnes Hospital. There a left-sided pneumothorax was made out and was promptly relieved by aspiration of the air. The urine was found quite normal; the blood contained 4,800,000 red cells, 6,000 white cells, 95 per cent. hemoglobin; the differential count showed 14 per cent. lymphocytes, 19 per cent. large mononuclears, 59 per cent. neutrophils, 2 per cent. eosinophiles, 1 per cent. mast cells, no abnormal forms. The blood gave a negative Wassermann but a positive complement fixation test for tuberculosis. The sputum contained blood but was otherwise negative. The blood pressure averaged 135 mm. and 90 mm. The electrocardiogram showed some right-sided preponderance and rare ventricular extrasystoles.

During the spring and summer the patient gained weight and felt entirely well when quiet. Her complexion then was rosy though her tongue remained constantly a little dusky. The amount, however, of exertion required to produce extreme dyspnea and cyanosis steadily diminished so that in the fall, the mere taking off of her coat sufficed to bring on a paroxysm. She repeatedly expressed her astonishment that one who felt so entirely well when quiet could feel so desperately ill when moving about. During the fall and winter she failed rapidly and died on May 1.

Autopsy done by Dr. N. Walsh of the Department of Pathology, Washington University Medical School revealed an extraordinarily interesting situation: The lungs were extremely emphysematous, their tissue appearing to consist of a collection of vesicles with smooth walls. These varied in diameter from less than 1 mm. to 5 mm., but most of them were of the large size so that the lung tissues seemed to consist of large vesicles separated by partitions. Where the pleura was not covered by adhesions, it was studded by vesicles from 2 to 5 mm. across. In a few places, the vesicles were larger and projected as round blebs with very thin walls, above the surface of the lungs. There were masses of calcified glands about the hila and in the mediastinum. Heart and great vessels were normal, there being in particular no atheromatous change involving the pulmonary aorta. The only other abnormality was a large, spindle-cell sarcoma involving the left kidney and with a few small metastases in the lungs. This ob-

viously was a late complication without bearing upon her ten years' ailment.

During her life the case was a puzzling one. The dyspnea and cyanosis appeared too extreme to be explicable without the assumption of dilatation of the right heart and the pulmonary arteries, in spite of the negative findings in this respect. Repeated X-ray examination showed no abnormality in the chest except the pulmonary emphysema and the calcareous mediastinal glands, a result that was fully confirmed at autopsy. The case illustrates the curious alternation between perfect comfort with rosy complexion at rest, and the most excessive dyspnea and cyanosis on slight exertion, that may be caused by a simple if extreme pulmonary emphysema.

3519 Washington Ave.

A NEW METHOD OF REMOVING THE MEDIAN BAR TYPE OF PROSTATIC OBSTRUCTION

JOHN R. CAULK, M.D.

ST. LOUIS

Before the annual meeting of the American Association of Genito-Urinary Surgeons in May, 1920, I presented a new method of treating the median bar prostatic obstructions and vesicle neck contractures, and at the same time suggested a method of anesthesia, which had proved very satisfactory in a series of twenty cases. Since then this method has been employed as routine in the treatment of these obstructions, with such satisfactory results that it seems worthy of a report in this Journal.

Before going into a detailed discussion of the method, it may be well to describe briefly the exact type of obstruction to which this method is applicable.

About 15 per cent. of all patients beyond middle life seek relief for symptoms of prostatic obstruction. I am of the opinion that there are many more individuals of this age who have prostatism, but who have been led to the belief that bladder disturbances are natural consequences of age and hence reconcile themselves to this fate, and for this reason do not consult their physicians. As the public is educated that bladder disturbances beyond middle life are significant of physical changes and not natural encounterers of age, I believe that the percentage will be appreciably higher.

During the last twenty years, there has been remarkable progress in the treatment of bladder neck diseases. In the main this has been due to the thorough appreciation of the importance of the kidneys, and to the proper institution of treatment before surgery in order that the highest renal efficiency may be obtained; to the accurate diagnosis of the type of obstruction and to the progressive improvement in prostatic surgery.

Whatever the type of obstruction, these factors have the paramount importance.

So much has been written about the impor-

tance of uremia, which occurs so frequently back of the prostatic obstruction, that it needs but passing mention. Regardless of the type of obstruction, a patient with a high residual urine, no matter what his general condition may appear, is not a subject for immediate surgery, but should receive preoperative treatment to reduce the back pressure gradually, dependent upon the obstruction until all the factors which bespeak the general safety seem satisfactory.

The exact diagnosis of prostatic obstruction, whereby not only the character but the extent is thoroughly understood, has added its important share in the general improvement of the treatment of prostatic obstruction.

Obstruction at the bladder neck may be divided into two main classes—the mechanical and the neurological. It is the mechanical obstruction with which we are concerned in this paper, yet owing to the frequent association of the mechanical and neurological obstructions, and furthermore from the interlacing symptomatology of the two, the urologist must be thoroughly prepared to differentiate between them. Any number of bad results of prostatic surgery have been due to the fact that the patient has been suffering from a nerve lesion which manifested itself by bladder disturbances. Such a mistake should not occur in competent hands. This thorough differentiation of the types of obstruction is made only by means of the cystoscopic examination, and no one can be prepared to give an accurate diagnosis without its employment. If the cystoscope were systematically used, certainly there would not be so many untoward results from prostatic surgery, nor would there be as much major surgery in cases where less radical measures are indicated.

The improvement in prostatic surgery has been directed along the line of major surgical attack, either for the adenomatous or carcinomatous prostate. In the adenomatous prostate, the surgery has been more or less standardized, and in the hands of a skillful, trained urologist, there can be little hope for a material improvement.

Treatment of carcinoma of the prostate has been greatly enhanced by radium, so that most cancers in this organ are treated either by surgery and radium, or radium alone. These two groups comprise only 80 per cent. of the mechanical obstruction at the internal orifice of the bladder, and with this 80 per cent., as was previously stated, there seems to be little chance in improving either our mortality rate or operative results.

The remaining 20 per cent. of internal vesicle orifice obstructions is due to contractures or bar formations, and it is with reference to this particular type that I wish to direct your

attention. Obstructions of this type may be due to glandular proliferation or infiltrative changes either from the median portion of the prostate itself or from pathological conditions originating in the suburethral glands. Randall of Philadelphia, after analyzing 200 autopsy specimens, found 14 per cent. showing various degrees of vesical neck contractions or bar formations, the largest percentage occurring between the second and fifth decade. Lowsley's analysis of anatomical specimens showed 14.2 per cent. due to enlargement of this type. In about 550 cases of prostatic obstruction which have come under my observation, 127 or 23 per cent. have been of the median bar, contracted neck type. In May we reported 485 cases, with 97 of the bartype, but recently our percentage has increased 3 per cent. in favor of the bars. It demonstrates the supreme importance of recognition of this type of obstruction, since it is with this type we may be able to secure better results with minor surgical measures which tend to reduce the general mortality of prostatic surgery. It is with this type that there has been no unanimity of opinion as to the best method of cure. Most of the patients have been given local treatment such as dilatations, massage, and instillations with but temporary, if any, improvement. Others have been subjected to gross major surgery with removal of a wedge-shaped piece of the median portion of the prostate, with average results.

Young, of Baltimore, in 1909, proposed his median bar excisor for the removal of this type of obstruction and has reported a large number of satisfactory cures. I, personally, have had a number of cures by this method. His operation has never been popular, since it is so frequently attended with hemorrhage and absorption, and the profession has been rather reticent in attempting this operation on account of the dangers and occasional disasters.

Others have proposed simpler methods, such as high frequency cauterization and incising the orifice through an endoscope with small cautery blades. The methods have not proved satisfactory in that the amount of obstruction removed was not sufficient to effect a cure in the average case.

The Chetwood galvanocautery operation, whereby the neck of the bladder is exposed by perineal section and incised by cautery blades, has in the hands of its originator and others proved a very satisfactory operation. It is done, however, as a major procedure to accomplish what I believe can be done by much simpler means. Since so many individuals suffering from this type of obstruction are younger men on whom one is rather hesitant in suggesting major surgery, but who do not improve on local treatment, it occurred to me

that if one could be able to remove sufficient tissue, as is done by means of the Young Punch, without the serious complications which follow his operation, a material benefit might be offered to the patient suffering from this type of obstruction, with a negligible mortality rate.

In January, 1920, I had Mr. Phillips of St. Louis construct an instrument for me, such as is shown in Fig. 1, which consists of an outer sheath containing a slot by which the obstruction is grasped and an inner sheath, which has at its terminus an iridioplatinum blade instead of a knife, so that obstruction may be effectively removed and at the same time hemorrhage and absorption reduced.

This blade is about one-fourth inch in width and of substantial thickness. I tried several smaller blades, but they proved entirely unsatisfactory in that they were too frail to stand the pressure and the heat was imperfectly distributed. I have performed 50 punch operations with the present blade and it is still firm and in good condition. The blade is insulated from the main sheath of the instrument by mica plates. At the proximal end of the tube, the current enters through a large contact point with screw attachment, one pole connected with the tube itself, the other with a large copper bar brazed to the surface of the tube and insulated with silk and mica. The cord which carries the current from the rheostat to the instrument is of large caliber and practically the same size as the copper bar within the tube.

I wish to explain a few of the essential features of the electric part of this instrument. In order to burn tissue properly and prevent hemorrhage the procedure must be done slowly under low heat. Otherwise the process is about the same as with a cold knife. To do this, we must be able to produce enough heat in the blade to burn the tissue without heating the shaft of the instrument. For this reason, the conductors have been made large and of uniform caliber throughout so that they offer the minimum resistance to the current which is thus brought directly to the only point of increased resistance, the cautery blade. In this way an intense heat may be maintained for a sufficient period of time without heating the instrument. The inner sheath serves as a handle for manipulating the instrument. The burning is best done by a slow rotary motion which is easily regulated by using this handle as a lever. I have put no irrigating attachment to the instrument since we do not need dilatation of the orifice and there is much less danger of short circuiting in a dry field.

With the Young Punch, the operation can be nicely done under local urethral anesthesia with cocain or novocain, for it is quickly over

and the pain is tolerable. In attempting to remove an obstruction by cautery, however, the procedure must be done slowly and the ordinary anesthesia is entirely ineffective. For this reason it is essential to have a more profound anesthesia, but since it is our purpose to minimize the risks and hazards of operating, it is most desirable not to subject these patients to general or spinal anesthesia. Sacral anesthesia would be very effective for such operations, but this again falls into the category of major procedures. In observing the obstruction within the grasp of the instrument, it occurred to me that it would be quite simple to infiltrate the tissues of the orifice with novocain through the outer sheath. I accordingly asked Mr. Phillips, the instrument maker, to construct a syringe, as in Fig. 1. This syringe has a pistol handle connected with a tube, about a No. 7 French, to the end of

pledgets are used to get the field dry. Under reflected light the syringe is passed down the tube and the needle is plunged into the tissue. Considerable pressure is sometimes needed in the very dense obstructions. The needle is gradually pushed through until it comes out on



Fig. 2.—Bladder neck formation, showing typical median bar formation.

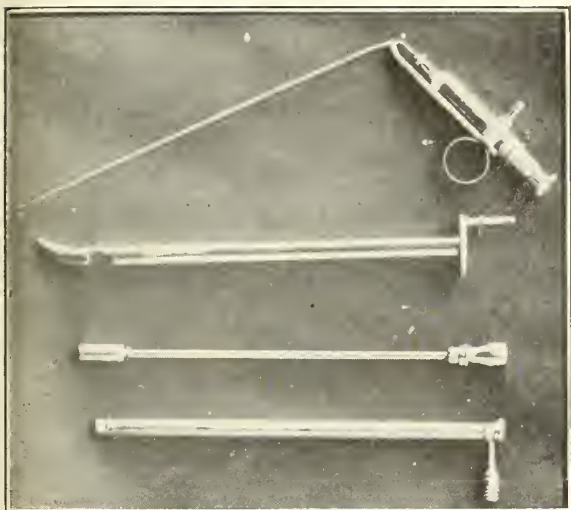


Fig. 1.—Cautery punch showing two sheaths and obturator; above, the infiltration syringe.

which is brazed an iridioplatinum needle. An ordinary Luer syringe is connected with the silver tube at its junction with the handle of the instrument. With this syringe it is perfectly simple under vision to infiltrate the vesical orifice. We have used 1 per cent. novocain, and one or two 20 mm. syringes usually suffice to produce complete anesthesia.

After washing the urethra and bladder thoroughly and leaving some fluid to be retained, the sheath with its obturator is passed into the bladder, the obturator removed and the fluid evacuated. The orifice is then engaged and the sheath moved around the circumference of the obstruction to be sure it is not trigone, although this is really not necessary. It is usually perfectly simple to discern the orifice with the obstruction engaged in the slot of the instrument. An evacuating tube and cotton

the other side of the obstruction. This is easily appreciated. The instrument is rotated and infiltration is done wherever it is necessary. After a few minutes the cautery blade which has been tested is passed down the sheath, which is held firmly in the left hand, engaging the obstruction. The current is then applied (with this instrument we use about 150 amperes, which gives the proper heat) and with a rotary motion the obstruction is slowly burned through. When this is completed the current is turned off. The inner tube is removed and the tissue extracted from the blade of the instrument. It is not removed through the inner tube by a forceps as the calibre of

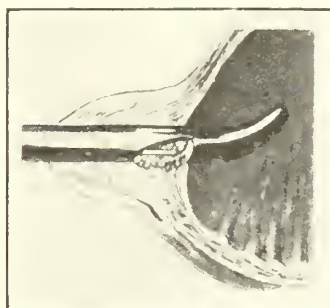


Fig. 3.—Bar within the slot of the instrument. The needle in the tissue for infiltration.

the tube is encroached upon by the copper bar, and more important is the fact that the tissue is so adherent to the blade through coagulation that it is difficult to detach it. If it is desired to remove pieces on either side of the primary wound, the instrument is ro-

tated to either side and the blade reinserted. I have observed with this instrument which takes a rather larger bite, that the midline posterior one is much larger than the others, evidently due to a complete cut through the obstruction allowing lateral retraction of the tissue. Should there be the slightest bleeding, the obturator tube with blade is reinserted and with very low heat the neck is cauterized. This operation can be done perfectly painlessly, the patient seldom appreciating that it is being executed and they have all remarked that it is less painful than a cystoscopic under local anesthesia.

We have operated upon fifty patients since January, 1920, for this type of obstruction, their ages ranging from 35 to 76. The majority were from 45 to 55. In almost every one there was residual urine which varied from one ounce to a pint. Most of the younger

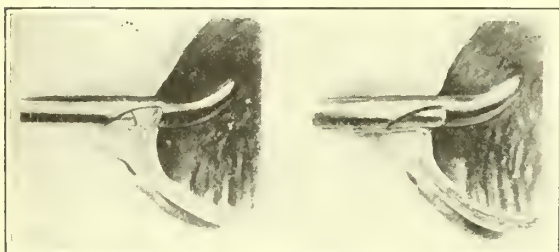


Fig. 4. (Left)—At beginning of operation with cautery punch engaged. (Right)—Bar removed, instrument sent home.

men had from one to six ounces. The operations, with but few exceptions, have all been done in the office—most of them sent to the hospital for a few days. Very few have remained in the hospital over a week, the majority having left on the third day. Only a few required a hypodermic of morphia for pain. There has been but two reactionary chills or fever following these operations, while many of the operations have been done on patients with badly infected urines and who were uremic. With the exception of three patients, there was not the slightest pain appreciated during the operation; most of them did not know that the current had been applied, demonstrating the great efficiency of infiltration anesthesia. Two cases, who had had marked tenesmus and irritability, suffered considerably during the operation, but their pain was just as severe with the instrument placed as it was during cauterization. There has not been an active hemorrhage a single time, nor have we had to evacuate clots. Most of the patients have had a slight staining in the urine immediately after the operation, some have had none at all. Some have bled very slightly, that is the urine was just stained for 24 hours and then bled no more. Many of the cases

have had slightly stained urine for two weeks, while a number of them showed no bleeding until at the end of two weeks and but slight terminal bleeding for a few days.

We have been bothered very little with postoperative retention; eight or nine of the cases had to be catheterized following the operation and several of these had the catheter left in place from one to three days. It is usually easy to predict at the time of operation whether a catheter will be necessary. If the patient immediately following the removal of the obstruction can pass a free stream after irrigation, he will rarely if ever be bothered with retention. If he is spastic and cannot urinate, he almost invariably will need a catheter from one to three days. The remarkable feature in the postoperative course of these patients, is there is so little pain. One patient had considerable tenesmus for several weeks, although he had had this same type of tenesmus intermittently for several years. We have noticed no gross sloughing, although at the end of two weeks many of the patients have passed out shreddy material. All but two of these operations have been done on median bars. The two exceptions were on individuals who had moderate lateral lobe hypertrophy and who were in such shape that a prostatectomy could not be done, since patients did not improve under the most protracted drainage. These patients were operated on—one, four and the other five different times, and from two to four pieces removed each time. They have both been cured of their obstructive symptoms. One now completely empties his bladder; in the other there is a residual of one-half to one and one-half ounces. Both have regained bladder function and control and are enormously benefited in their general health. One of these patients has gone a year without the slightest recurrence. Two of these operations have been done on recurrent cancers with excellent urinary functional results. Several have been done for postoperative fistula after which the fistula has closed. There is not a single one who had residual urine who has not been cured of it.

Two patients of exceeding interest were suffering with referred pain, one with perineal pain, a sort of a draw-string, puckering sensation, which he had had for years and which had resisted all sorts of treatment. He was immediately relieved after removal of his bar obstruction. It has evidently been the result of the pulling at the prostatic orifice, due to contracture.

Another patient, whom I had treated for a long time was suffering with pain around the region of the hips. This patient had marked prostatic and vesicle infiltration and had been operated on for stricture with extravasation

twenty-five years ago, and had always had trouble with his bladder as well as a pulling sensation in his hips. He improved but slightly under local treatment, but was immediately relieved after removal of the bar which was very thick across the median portion of the prostate. He said he felt as though a load had been taken away from him. This case is a recent one and it is hard to predict a future of the pains in the hip. Several of the patients had to be done twice since the obstruction was not completely removed the first time.

There has not been the slightest incontinence following the operation except in two individuals, both of them having had an incontinence beforehand, following prostatectomy elsewhere. One had a rectourethral fistula in conjunction with his incontinence. I repaired his rectourethral fistula, but he had a bar remaining, which was later removed with the Punch; patient is still leaking. This is, I am sure, due to the complete destruction of the nerve supply and muscles of the bladder neck. The other man had his prostate removed in the face of a paralytic bladder, but when I saw him, there was a dense band across the bladder neck which was removed with the Cautey Punch. This patient had a complete incontinence for a month, but is now able to retain over six ounces and is daily improving. There has never been the slightest incontinence, which did not have a definite reason for it.

Therefore, in analyzing these fifty cases, it seems that this operation, owing to its simplicity, its freedom from hemorrhage, infection and other complications and from the fact that the results seem substantially good, offers itself as a method of choice for the group of prostatic obstructions, due to median bar formations or contractures of the vesical neck and for certain limited cases of lateral lobe obstructions. Since it should be attended with practically no more mortality, I believe it commends itself as the method of surgical intervention for this type of obstruction and for the general lowering of the mortality rate of prostatic obstruction.

University Club Building.

REPORT OF COMMITTEE ON OBSTETRICS FOR 1920*

M. A. HANNA, M.D.

KANSAS CITY, MO.

Information assembled by the Bureau of Vital Statistics shows that the mortality rate for the year 1920 has not materially improved

*Read before the Jackson County Medical Society, January 4, 1921.

in obstetric practice, except in some of the larger cities where there are large well regulated clinics. Intelligent women now avail themselves of the ideal environment offered in all of the large cities by well appointed maternity hospitals. Education has not yet been sufficiently far-reaching to neutralize the superstition, ignorance and false modesty which still has a sinister and dominating influence in all things associated with the phenomena of reproduction. As a result of this condition, midwives are still delivering about 50 per cent. of the babies and a relatively small number of women receive instruction in prenatal care.

There are several outstanding reasons why the plane of obstetrical practice has not been raised along the standard of general surgery. One important reason is the fact that the teaching in most institutions has been very inadequate and inefficient in this particular branch. Doctor Ruben Peterson recently contributed an article on obstetric teaching in which he stressed the importance of a more thorough and extensive clinical instruction for students, and also called attention to the pertinent inter-relation existing between gynecology and obstetrics.

Another reason why obstetrics is not attractive to men is that the business as a specialty becomes an autocratic task master, that exacts service 24 hours each day and 365 days each year.

Many people are still imbued with the antique notion that reproduction is a process of nature and does not require an exhibition of skill on the part of the attendant. Consequently, individuals do not willingly pay a fee commensurate with the amount of time, nervous and physical energy expended in conducting a case of confinement, which involves a responsibility for the lives of two individuals.

A very encouraging and conspicuous development in the teaching of prenatal care is demonstrated in the fact that it has within the past year in various ways been reduced to a practicable basis. Many of the Women's Clubs, Visiting Nurses' Associations and Parent Teachers' Organizations have established lecture courses in connection with clinics where women can report at regular intervals for urinary analysis and antepartum examinations and receive other information in the matter of personal hygiene that might have a bearing on pregnancy and labor.

The particular thing to be watched for and eliminated in the prenatal clinic is the occurrence of the toxemia of pregnancy which if observed early can be corrected. Owing to the propaganda that has been released relative to the relief of the discomfort of labor, popularly known as twilight sleep, it has become necessary for doctors to make a serious effort

along this line. The National Anesthetic Research Society has recently contributed an exhaustive monograph on this subject. The following deductions are herewith appended relative to nitrous-oxid analgesia. Labor is shortened 25 per cent. The stay in the hospital is shortened two days. It does not interfere with the milk supply. By assuring the operator better control of the patient, it appreciably reduces the danger of severe lacerations. It is not necessary to change to ether in the majority of cases. It does not invite postpartum hemorrhage and may be used in obstetrical operations.

Some very interesting experiments have been carried out by Dr. Rodda relative to the coagulation of blood in the newborn with specific reference to cerebral hemorrhage. His conclusions are first that cerebral hemorrhage is a frequent occurrence in the newborn and is the most frequent cause of death in the first days of life. Cerebral hemorrhage is not always caused by an obstetrical operation but may follow a normal labor when least expected. Severe traumatism results in massive cerebral hemorrhages and early death. A more frequent cause of cerebral hemorrhage is a mild traumatism plus hemorrhagic disease of the newborn accompanied by findings of a delayed coagulation time and a prolonged bleeding time. A delayed coagulation time and prolonged bleeding time can be controlled by subcutaneous injections of whole blood. This should be a routine therapy in cerebral hemorrhage. In severe cases, surgery should be employed early. The operation should be controlled by blood studies and the injection of blood is indicated. The coagulation time and the bleeding time should be determined in every newborn presenting unusual symptoms or better as a matter of routine. If reactions are delayed blood should be administered promptly.

The only other two articles to which I choose to call special attention as having a bearing on progress in obstetrics were contributed by Dr. Joseph B. DeLee. He has always been the most radical teacher of ultra-conservatism. These two articles coming from his pen appeal to the men who know him best as being extremely radical. One of these articles has reference to the second stage of labor with special reference to the prevention of injury to the child and pelvic floor. He attempts to excuse some of these maneuvers on the basis that the public is demanding that labor be rid of some of its horrors. This procedure is employed only in cases of primiparae with the intention of reducing fetal mortality during or immediately after birth, and reducing the number of severe injuries to the head, such as rupture of the tentorium cerebelli, intracranial

hemorrhage, retinal hemorrhage, facial paralysis, etc.

The most common dangers are asphyxia from abruptio placentae or prolonged compression of the brain resulting in intracranial hemorrhage. The only reliable means of determining asphyxia is the industrious use of the stethoscope.

The procedure recommended by Dr. DeLee is known as "A Prophylactic Forceps." This procedure is undertaken only after dilatation is complete and the caput can be observed on separating the labia. The first step in this procedure is a perineotomy which is accomplished by using a sharp, rather heavy scissors, beginning at the raphe of the fourchet, carrying the incision through the skin and urogenital tract to the facia covering the levator muscle. The incision is enlarged as the indications may demand. The forceps are then applied and the delivery is completed under gas-oxygen or ether anesthesia. He justifies this procedure as a routine in the interest of the mother and the baby, but admits that it is a very radical departure from the time-honored customs.

The second article by Dr. DeLee of more than passing interest, has to do with the treatment of Obstinate Occipito-Posterior Positions. There are a large percentage of these cases in primiparae that will not for obvious reason rotate within a reasonable time. To hasten delivery, prevent exhaustion on the part of the mother, injury to the fetal head and post-partum hemorrhage, DeLee has evolved and recommended the following technique. Hodges maneuvers should be attempted and if accomplished the head will oftentimes revert to its original position. In order to prevent that occurrence a double vulsellum hook or eight-inch artery clamp is attached to the caput over the occipital bulb and the head is held in this position while the forceps are being applied. The delivery is then accomplished in a classical manner.

Dr. DeLee has performed this operation often and always successfully, and recommends it for general practice. After delivery the small wounds on the baby's scalp are touched with iodine. Even when the head has not been engaged, he has succeeded in rotating and holding it in position with a vulsellum, but states that it is best first to effect the rotation with the hand.

Dr. Ross McPherson reports a series of post-partum cases where routine catharsis was employed and an equal number where no laxatives were used. The series showed a greater number of temperatures in those cases that were given cathartics than in those that received enemas.

Dr. Polak gave a paper before this body during the year on a cesarean section technique

to be employed in those cases where an infection might be expected. Dr. Polak's paper was so thoroughly enjoyed by the Society that further comment would not be in good taste.—*Jackson County Medical Society Bulletin.*

SPECIAL ARTICLE

MISSOURI PUBLIC HEALTH LEAGUE

The Missouri Public Health League, which was organized at a meeting of more than five hundred doctors and laymen from all parts of the state of Missouri, at Hotel Statler, April 26th, in the interest of public health and for the purpose, at this time particularly, of revoking the referendum on Senate Bill No. 433, is being enthusiastically supported by citizens in every county of the state.

The new organization came into being upon the recommendation of the Committee on Health and Public Instruction of the St. Louis Medical Society, which was appointed to determine the procedure which should be adopted to protect the public against such legislation as Senate Bill No. 433.

The meeting at Hotel Statler was representative of some of the best minds in the profession and prominent laymen in all walks of life. It was called to order by Dr. A. H. Hamel, the St. Louis chairman of the Committee on Health and Public Instruction of the St. Louis Medical Society, and Dr. Hanau W. Loeb, the dean of the medical school of St. Louis University, stated the purpose of the meeting. When this had been done, a tentative constitution was read and unanimously adopted—thus the organization came into being. Its purposes and aims are best stated in excerpts from speeches as contained in the stenographic record of the proceedings.

Melville L. Wilkinson, President of Scruggs, Vandervoort-Barney D. G. Co., one of the largest department stores in St. Louis, was proposed for Chairman by Dr. Nathaniel Allison, Dean of the Medical School of Washington University. Mr. Wilkinson was elected and said:

"I am sure there is not a man or a woman present today but what fully realizes the necessity of such a meeting. If there is anything that we look forward to in life, especially in a community of civilization, it is to look into the faces of the men and the women of the profession of medicine when we invite them into our homes to take care of us, and I don't believe there is any protection outside of spiritual protection that we need as much as that given by those so well qualified and with such a standing that we have the utmost dependence upon them in looking after our health.

The preservation of life is just as tender to them and emanates from their hearts the same as it would from our spiritual advisers. There is no element of protection that to me is as sacred as that of the family physician in the home, and I am sure that is the purpose of this meeting, that we may be able to protect by legislation and in every other way the sacredness of the profession of medicine."

Dr. Loeb then followed with a statement of purposes, which is as follows:

"We are assembled today to answer a call which has come from every part of the great State of Missouri, from the cities with the restless currents of their conflicting struggles; from the villages where, though the waters are more shallow, they still give evidence of opposing forces. From all over the State you are come together, not alone to express your disapproval of the recent enactments which put back the clock of progress in medical education in Missouri, but more important still, to prevent such an occurrence forevermore in this fair State of ours.

"I need not repeat to you the history of the past few months, in which the deliberate attempt has been made to sweep away the bars erected during the past twenty-five years to protect the public health. I need not recount to you how the same cloven hoof has appeared in each successive legislature since that time in opposition to all measures restricting the license of the unqualified and the unworthy. I need not relate how the medical profession has borne the brunt of the attack and has unflinchingly stood the charge of selfishness when it merited commendation and gratefulness.

"This has always been the portion of medicine; to shield and to aid the public whether in the fight against disease directly or in the erection of bulwarks of defense. She has stemmed the tide of those who would prey upon the public by exploiting silly but pernicious theories of disease or by the use of cure-alls and methods that have less basis than the Pythagorean theory of the metempsychosis.

"We see the same old succession of events through the centuries. The cults are born, fascinate the public, have their day, and then die an ignoble death. They return, however, newly discovered by some enthusiast, predatory or accidental, whose knowledge of the history of cults is deficient, and again they go through their cycle of life and death. And today there are only a few left-repeaters, may we call them, of long exploded fallacies, which, too, will sooner or later sink again into oblivion.

"But medicine goes on and on, old in history, tradition and honor, but young in spirit

and progress, fighting each step of the way against ignorance, deceit and selfishness, ever victorious but always challenged by those cohorts of opposition.

"It is a strange profession, this healing of the sick. It cannot be a business, for then physicians would endeavor to multiply the sick and thereby add to their customers. Instead, their constant endeavor is to reduce the sickness of the world by the prevention of disease, which today more than ever is the dominant note of the profession. Only physicians know how prevention of disease and effective means of curing disease have changed in the practice and actually lowered the income of medical men. In fact, the whole matter of public health invokes a change in the financial status of physicians that would be considered an impending calamity in any other calling or business.

"Whoever heard of any of these cults, sure-cure expounders, vendors of patent medicine or preachers of theistic negation or absolution of disease, lending a hand in public health? Whoever heard of them taking any stand except that of opposition to any preventive measures of which the value has been determined beyond cavil? But the medical profession continues to advocate them, to foster them and to develop them.

"And today we ask you, the great public of Missouri, not only to accept us as willing servants for your weal, but also to become our partners in the fight for public health, to aid in re-establishing the fair name of Missouri in medical education and practice, to improve the status of the healing art inside as well as outside the profession, and to apply the principles and practice of public health and hygiene to the fullest possible extent in the great State of Missouri." (Applause.)

Judge W. C. Russell of Charleston was the next speaker. He said:

"Mr. Chairman: One day last week I had occasion to visit a doctor's office in this state and I saw hanging on the wall of his office this motto: 'It is better to fall down on the job than to lay down.' Having been present today at a meeting of some of the medical profession of this state, and having heard discussed Senate Bill No. 433 which was passed at the last legislature and approved by the Governor, and having heard some discussion pro and con as to the advisability or the inadvisability of taking any further steps to protect the citizens of the State of Missouri from the vice of that bill, that motto was impressed upon me that if that bill is vicious—and that seems to be almost the unanimous opinion of the medical profession and the doctors whom I have heard discuss the matter—it seems to me that it would be better for the medical profession

of the State of Missouri to fall down on the job rather than at this time lay down and do nothing for it. Therefore, I move you that it is the sense of this meeting that Senate Bill No. 433 passed by the Legislature of Missouri and approved by the Governor, be referred to the people for their approval or their rejection." (Applause.)

In seconding the motion, Dr. C. R. Woodson of St. Joseph said:

"Mr. President, Ladies and Gentlemen: Since the days of Hodgden, of Gregory, of Johnson and of Robinson, the Missouri State Medical Association and the doctors of Missouri in general have been trying to improve medical laws. In view of the fact that we have two great schools here that are the equal of any in the country, and doing everything to uphold the standard of medicine rather than have it lowered, I desire to second the motion to refer this to the people of the great Commonwealth of Missouri." (Applause.)

(The motion was put and adopted without a dissenting vote.)

Mr. George Eigel, a member of the legislature from the first district, followed with a lengthy address, in which he denounced Senate Bill No. 433 as vicious because he felt that it would lower the standard of the medical profession in the State of Missouri. He said in part, as follows:

"Getting right down to the merits of this bill, a man must be an idiot or refuse to think if he cannot see that this bill is a step backward rather than a step forward in the medical profession. If you are going to permit me to organize a corporation and call it a medical school, get in two or three or four medical men who are unscrupulous enough to join with me, take a boy's money and say, 'Yes, we can make a medical man out of you in three or four years, the law prescribes four years, just so you are down here four years,' and then turn him loose upon the general public. I think we are committing a crime, but under this bill you can't prevent it. When you change the words that have been changed in that bill from 'reputable' to 'some medical college,' there is nothing to prevent three or four men from organizing a corporation and opening up a medical school, give them an 'M.D.' and turn them loose and let them work on the public and let them get their experience from the people they are working on. Just as I say, I consider this bill a vicious measure; I fought it two years ago, I fought it this year. We succeeded in the House in amending the bill in such a way that it was harmless; in fact, it made the qualifications more drastic than they were before, but when it got to the Senate they put it back in its original form, and then it came back into the

House and mustered enough votes to put it over.

This bill is certainly inimical to the best interests of the general public in that it will give us doctors who, I am afraid, are not up to the standard that they should be." (Applause.)

Dr. M. P. Ravenel of the University of Missouri (Columbia) followed:

"It seems to me that we can sum up all these questions in one—Do we stand for efficiency—personal, moral and physical? President Eliot, of Harvard, has said that Descartes, the great French philosopher, influences the modern generation more than any other man who ever lived with one exception. Descartes said that if the human race would raise itself off the level—intellectually, morally and physically, the science of medicine would perform that service.

"If Descartes were living today, he would change the word 'medicine' into 'hygiene' or into 'preventive medicine.' I will say right here that I think too many of the public think of medicine only as the healing art. Do not understand me as belittling the healing art. There must not be lack of knowledge and advancement. We must still have the relief of pain. The veriest tyro in medicine knows that the great thing for a people as a nation is to prevent disease and not to cure it. An ounce of prevention is worth a pound of cure. In proving this proposition, then, that preventive medicine is the great thing, what may we consider? Our medical education in this state, as we see it, has been attacked, medical educational standards are in danger of being lowered. Look at the wonderful triumphs of medicine that we have seen in our own day and time. The Canal Zone, for example, at one time the worst pest hole on the face of the earth with the possible exception of the Roman Campagna, and in less than six years converted into a region which has a smaller death rate than any city of the United States of equal population. A preposterous statement it may sound, but which is absolutely true. How was it done? Was it done by giving medicine? Done by pushing a button in the backbone? Done by walking on wet grass in the early morning? Done by drinking cold water, or by injecting hot water up the rectum, or done by any of the methods advocated by any of these hundreds of new schools of medicine? It is an odd day in the month in America when we don't have a new school of medicine. There are schools of healing, there are schools of drug treatment, there are schools of treatment by medicine. I say I do not belittle the healing art, but the great thing is the prevention of disease, that after all is what we want.

"Prevention of disease means efficiency; it means the lessening of the suffering of humanity. Now, how are we to accomplish that? We can do nothing without an intelligent public at our back, therefore we must educate the public in these mysteries to some extent. I think we have been to blame in the past writing out prescriptions in Latin, keeping everything secret. Now we are taking the public into our confidence. We are publishing throughout the length and breadth of this land in the columns of reputable newspapers good sound doctrines of public health and prevention of disease, and that is where our strong point lies.

"How would we ever have gotten along on the Isthmus of Panama in the great war which we have just passed through, when we found that practically one-third of our young men between the ages of eighteen and thirty-two were unfit for military duty? Had we not a great problem before us? Did we not need efficiency? As Lloyd George said for England can we say for America—'Can we have an A1 empire with an A3 public health?' Never in the world. We can never have an A1 America without having an A1 public health, because public health is public efficiency, and above all things we must have education and increase that efficiency. Now, what are some of the things that are confronting us at the present day? Child welfare. Taking care of prospective mothers. Can that be done by any of these fads? Not at all. Taking care of the great venereal disease problems. Can that be done by such means? Not at all. You all know of the terrible ravages of typhus fever in Serbia. Typhus is in our country at the present time. Is it going to spread? Not in a thousand years. It will never get beyond our seaport towns, never in the world. Bubonic plague is in our country at the present time. Will it spread in the United States? Not at all. There will be a few cases in some of our seaport towns, but it will stop there. Would any fad stop those things? Never in a thousand years. Only profound study, only profound research in all branches of medicine, in biology, physiology, chemistry and anatomy, has brought about these great achievements of medicine. As has been well said, the very minute we strike at medical education we are striking at the medical profession. We are not business men. We are destroying our own business. The minute we strike at medical education we strike not alone at the medical profession but at the welfare of the public. I thank you very much." (Applause.)

The tentative constitution was then read by

Judge Irvin V. Barth of St. Louis, the text of which follows:

ARTICLE I

NAME

The name of this association shall be the Missouri Public Health League.

ARTICLE II

OBJECT

The object of the League shall be to disseminate information concerning questions of public health; to protect the people of Missouri by fostering progressive public health measures; to use all legitimate means to further the enactment of legislation beneficial to the public health; to oppose the enactment of all legislation detrimental thereto, and to use every proper means to cause the repeal of all laws pernicious to public health.

ARTICLE III

MEMBERSHIP

Members shall be of three classes: First, patrons paying \$25.00 or more per year; second, contributors paying \$10.00 per year, and third, regular members paying 10 cents or more per year. All candidates for membership shall be first approved by the Council.

ARTICLE IV

OFFICERS

The officers shall be a President, one or more Vice-Presidents from each Senatorial District, a Secretary and a Treasurer, all of whom shall be elected annually by the Council and shall be ex-officio members of the Council.

ARTICLE V

COUNCIL

The Council shall be composed of 30 members, serving for five years, one-fifth thereof to be elected at each annual meeting. The Council shall have full direction of the affairs of the League; subject, however, to any instructions given by action of the members at any annual or special meeting.

ARTICLE VI

MEETINGS

The annual meeting shall be held on the second Monday of April of each year, at a place designated by the Council. Special

meetings may be called by the Council or by 25 members to act only on such matters as are designated in the call for the meeting. The call for the annual or any special meeting shall be by notice published ten days in advance of the meeting in at least one newspaper in each of the following cities: St. Louis, Kansas City and St. Joseph.

ARTICLE VII

AMENDMENTS

This constitution may be amended by a two-thirds vote of the members present at the annual meeting or at a special meeting called for the purpose, provided at least ten days' notice be given of the proposed amendment.

Mr. Chairman: In order that the matter may be brought concretely before the House, I move the adoption of the constitution.

(The motion was duly seconded and unanimously adopted.)

A governing council was then elected, as follows:

Dr. Nathaniel Allison, St. Louis.
 Dr. G. E. Bellows, Kansas City.
 Dr. T. W. Cotton, Van Buren.
 Dr. W. J. Ferguson, Sedalia.
 Dr. A. H. Hamel, St. Louis.
 Mr. Frank V. Hammar, St. Louis.
 Mr. J. L. Hornsby, St. Louis.
 Dr. R. M. James, Joplin.
 Dr. Hannau W. Loeb, St. Louis.
 Dr. W. H. Luedde, St. Louis.
 Mr. Aaron Waldheim, St. Louis.
 Dr. Guy W. Lemmon, Springfield.
 Dr. Daniel Morton, St. Joseph.
 Dr. Harvey G. Mudd, St. Louis.
 Dr. M. P. Overholser, Harrisonville.
 Dr. W. B. Pettibone, Hannibal.
 Dr. H. E. Pearse, Kansas City.
 Dr. H. L. Reid, Charleston.
 President J. L. Roshmer, Lindenwood College.
 Dr. M. P. Ravenel, Columbia.
 Dr. Borden S. Veeder, Secretary, St. Louis.
 Judge John I. Williamson, Kansas City.
 Dr. J. Franklin Welch, Salisbury.

The movement for the referendum was then outlined by Dr. Borden S. Veeder of St. Louis, who spoke as follows:

"Mr. President, while of course all plans and all work of this League will be discussed and carried out by the Council, anything that I have to say is purely a personal matter; that is, all official action and plans will be developed in the Council. It was thought that it might be of some interest to you to know some of the plans that have been talked over and the plans that will be presented before the Council for definite action. There is one definite, specific thing before us which is the

purpose of the organization of this meeting, and that is the putting over of this referendum. It is necessary that five per cent. of the votes at the last general election, representing two-thirds of the Congressional districts, shall be obtained, and that will necessitate the procuring of about sixty to seventy thousand votes, distributed through these Congressional districts, in a period of about two months. So you see we have got to get busy. It isn't a thing that can be dawdled along with.

"We have planned and had drawn up by attorneys a form of petition which will be legal. These petitions will be circulated through committees or groups of men—doctors and laymen—in the various districts, and at the same time a second subscription list, one might say, or application for membership list, will be circulated with this in order to raise funds and for obtaining members for this league. The finances to start with have been underwritten by a group of men. It is the plan to employ an expert to act as manager, a man fully qualified to give his entire time to this work during the next two months. Now, whether or not this referendum goes through, whether we obtain sufficient names, depends not upon the Council, but entirely upon the support which we get from medical men and from laymen throughout the State. Already many people are coming to us and saying: 'Give me a petition, I'd like to circulate a petition for referendum against this bill,' and we have no hesitation in saying that we are sure that within a month we will have all the signatures that are necessary, provided everyone turns to and gives us a little help."

James W. Byrnes, President of the Byrnes Belting Company, St. Louis, made a motion that the Council have full authority to revise the Constitution in all matters pertaining to the League whenever advisable and necessary.

The motion was carried.

Dr. G. E. Bellows of Kansas City, President of the Jackson County Medical Society, also spoke, stating that he was not authorized to make any pledge, but was confident that the medical profession in Jackson County would heartily support the referendum.

(Jackson County Medical Society has since officially approved the referendum.)

The meeting was then adjourned.—*Bulletin St. Louis Medical Society.*

ACIDEMIA IN CHRONIC NEPHRITIS.—Beaumont S. Cornell, Brockville, Ont. (*Journal A. M. A.*, March 12, 1921), says, in a discussion of noncardiac dyspnea, that for the purpose of distinguishing it from heart dyspnea, two observations are helpful: It has no accompanying cyanosis, and it is speedily removed by the administration of sodium carbonate by mouth.

From a study of more than 100 cases of chronic nephritis made by the author, it is apparent that various degrees of this dyspnea occur. Some patients (5 per cent.) show none at all. The majority have it, but not sufficiently to complain of it. Perhaps a fifth of them will mention it; and, finally, in about 5 per cent. of cases it is the most distressing symptom. On what factors the degree of the dyspnea depends is uncertain. No doubt the degree of acidemia and the degree of sensitiveness of the respiratory center are cardinal considerations. But, beyond these again, why should the blood of a nephritic be unable to rid itself of the acids of exercise as quickly as the blood of a normal individual? The explanation probably does not lie in the fact of lowered renal excretion, because (as seen above) the 50 per cent. patient may be as dyspneic as the 16 per cent. patient. The practical value of clinical detection of acidemia is twofold: (1) *In Early Diagnosis.*—A syndrome of lumbar pain, frequency (day or night) and dyspnea of noncardiac origin is suggestive of incipient nephritis, even in the absence of albumin. Noncardiac dyspnea is a very early symptom in nephritis and has frequently led me to prolong the search for albumin with ultimate success, even though the albumin was absent as long as two weeks. (2) *In Treatment.*—The physician will frequently meet a nephritic whose distressing dyspnea fails to respond to digitalis; he has no cyanosis or cardiac enlargement or signs of cardiac decompensation. To this patient sodium bicarbonate (pure) in sufficient doses gives prompt relief. So far as I know, there is no contraindication to its use. The only caution, perhaps, should be not to render the urine alkaline for too long a period, thereby facilitating phosphatic deposits.

NEWER ASPECTS OF SOME NUTRITIONAL DISORDERS.—Alfred F. Hess, New York (*Journal A. M. A.*, March 12, 1921), reviews current views on vitamins and their relation to nutritional disorders, especially scurvy and rickets. Speaking of the use of cod liver oil in the treatment of rickets, he says: "It is recognized as a drug which benefits nutrition, but the fact that it has unequalled value in the prevention and cure of rickets is hardly realized." It is possible to rid any locality of rickets by means of the use of cod liver oil. There are approximately 125,000 children in New York City between the ages of 3 and 15 months, the period of greatest susceptibility to rickets. If we estimate generously that the families of one-third to one-quarter of these children are unable to purchase cod liver oil, and if we agree that the development of rickets may be prevented by giving a teaspoonful three times a day, then, at the present cost, rickets could be practically abolished in this city by the expenditure of about \$150,000 a year. This is merely one of many instances in which the community does not get the full benefit of medical knowledge. Studies of the deficiency diseases have served to illustrate in a most convincing manner the intimate relationship of nutrition to infection, and have led to attributing increased significance to the former. Indeed, the chief clinical importance of disorders of nutrition seems to be associated with the fact that they bring about an abnormal condition of the tissues which renders them more susceptible to the invasion of bacteria or their products. Veterinarians and farmers are well aware that faulty nutrition leads to fatal infections. This "nutritional-infectious" aspect has been convincingly illustrated on a large scale among the peoples of the Central Empires, who during the many years of the war suffered from various forms of malnutrition. The general impairment of health was most strikingly manifested both in adults and in children by the great spread of tuberculosis and its increased mortality.

THE JOURNAL

OF THE

Missouri State Medical Association

JUNE, 1921.

EDITORIALS

THE ST. JOSEPH MEETING

From every standpoint the 64th annual session of the Association, held at St. Joseph, May 24-26, was one of the most successful meetings in our history. By a very scant margin the attendance was the largest ever registered and the interest in all the proceedings was well sustained.

With a program in the scientific sessions of unusual length but containing many papers of more than ordinary interest, with the endorsement of the referendum on Senate Bill No. 433 after much favorable discussion and only two voices in opposition, with two night sessions and the business sessions of the House of Delegates, and with the entertainments prepared by the Buchanan County Medical Society, the time of every member was so occupied in attending meetings that there was little opportunity for social visiting.

The discussion on the referendum was not long. No lengthy discourses were needed because it was clearly apparent that the movement was unqualifiedly supported by the great majority of the members. Some expressions of fear that the undertaking would prove fruitless and therefore discouraging were heard, but that sentiment only brought forth renewed expressions of confidence and an appeal for determined and persistent activity to obtain the required number of signatures.

The treasurer's report showed conclusively that the work of the Association could not proceed successfully on an assessment of three dollars per member so an amendment to increase the annual dues to the State Association to five dollars per annum carried unanimously after a little discussion that emphasized the need for the increase. One dollar of the dues will hereafter be set aside for a legislative fund, which ought to provide a sum sufficient to establish means of watching all bills affecting the physician and the public health and enable us to arm ourselves for contests before bills have gotten beyond control.

The election of Dr. A. H. Hamel of St. Louis for president was unanimous and is a recognition of long and faithful service in the interests of the Association, a service that has prepared him to direct the affairs of the

organization from an intimate knowledge of its activities and in thorough accord with its purposes. The other officers elected were: First vice president, B. W. Hays, Jackson; second vice president, C. W. Russell, Springfield; third vice president, T. E. Moore, Trenton; fourth vice president, G. O. Cuppidge, Moberly; fifth vice president, H. W. Carle, St. Joseph; secretary, E. J. Goodwin, St. Louis (re-elected); treasurer, J. Franklin Welch, Salisbury (re-elected). Delegates to the American Medical Association, R. E. Schlueter, St. Louis, J. C. Lyter, St. Louis; councilor first district, W. G. Safford, Tarkio; fourteenth district, C. T. Ryland, Lexington (re-elected); sixteenth district, T. B. M. Craig, Nevada (re-elected); nineteenth district, W. A. Clark, Jefferson City; twentieth district, H. S. McKay, St. Louis; twenty-fourth district, T. W. Cotton, Van Buren.

Excelsior Springs was selected for the meeting of 1922.

The committee on arrangements at St. Joseph under the chairmanship of Dr. Floyd H. Spencer, worked unceasingly for the comfort and pleasure of the members, and the ladies' reception committee, of which Mrs. Floyd H. Spencer was chairman, made every hour of the day a source of pleasure and diversion for the ladies who accompanied the members.

This brief sketch of the meeting is all that can be prepared at this time because of the necessity for going to press with the JOURNAL.

THE REFERENDUM

Every member of the Association is most earnestly urged to give every moment of his time that can be spared, even at the sacrifice of other duties, in obtaining signatures to the petitions for the referendum on Senate Bill 433. The Association endorsed the movement in very positive terms and the obligation to assist in securing the required number of names from the congressional districts rests upon every member. The vicious nature of the bill was a source of much discussion among the members at the meeting both on the floor of the assembly and in private conversation and the referendum movement will serve as a means of opening the eyes of the people to the need of controlling the sort of physicians that are admitted to practice in this state, whether they locate in large cities or in small towns and rural sections. From reports received at the headquarters of the Missouri Public Health League it is very certain that the people are willing to sign the petitions and will defeat the bill at the polls when they have been informed of the serious nature of its provisions.

The petitions should be sent to the Missouri Public Health League, 3525 Pine Street, St. Louis, as fast as they are filled. Additional petitions will be sent by the League so that the work can be vigorously prosecuted until the time expires when petitions must be sent to the state officials. This will be done by the League when the required number has been completed. Some members have sent their petitions to Jefferson City. This should not be done. They must be sent to the Missouri Public Health League at the address mentioned above and all correspondence on the subject of the referendum should be directed to the League.

MEDICAL AUTHORS AND THEIR ENGLISH

For many seasons—for so many that they cannot be counted—medical English has been attacked by those purists in medicine whose number, alas, is so small that their weight is almost negligible. When we say “medical English” we do not mean anything pathological but the English flung about in medical articles by writers who should know better, and if they do not know better they should not affront the tender sensibilities of those who have an ear for English, if not in its best estate at least in that state which makes for precision and clarity of thought. And when we say “purists in medicine” we do not wish to convey the idea that we are speaking only of “ethical” physicians—those who shun “unethical” preparations, flee from them as if they were the pest—but of all sorts and conditions of men who have been known to fling away a medical journal in disgust because of the bungling English used, which is not even on a par with the daily paper or that classic of classics, if we are to judge from what is oftenest seen on the waiting-room table, *The Literary Digest*. Having made ourselves clear in the matter and hoping that the reader will not class us with that unpopular class of men, the over-captious critics, we shall proceed to expatiate on the sins of “medical English” abetted as we are by a recent editorial, “The Careless Writing of Medical Authors,” in *Archives of Dermatology and Syphilology* for April.

According to W. A. P., who wrote the editorial, the eyesores to him in medical writings are “so-called,” “marked,” “pronounced,” “quite,” “palms of hands,” “soles of feet,” “taste in the mouth,” and, above all, the statement that a patient “was a lichen planus.” His strictures are not without just cause, but most of them have been uttered before, especially the decided objection, in so exact a science as is medicine today, to the vague expres-

sions “so-called,” “quite,” and the positive expressions—“marked” and “pronounced” in so inexact a science as is medicine today! “Palms of hands,” “soles of feet,” and “taste in the mouth” are conversational English, by which we mean the daily careless perpetration of English on the ears of others irrespective whether these ears have risen above the solecisms peculiar to journealese English. And as regards the statement that “a patient was a lichen planus,” the objection is well taken and should give us pause, but not for long, for the reason that it is just as euphonious (?) and just as incorrect to say this as to say “the patient has lichen planus.” But who pauses long enough to say “the patient has got lichen planus,” and who today is not prejudiced against the word “got” because of the raging controversies whether we should say “having gotten” or “having got?”

There are other objections to “medical English” from our standpoint, which are much more important and if heeded would make the “reading” life of the physician, as regards his careful perusal of medical articles and his study of the weighty text-books and monographs, a pleasure instead of an irksome task that eventually tears into his nerves until all pleasure and profit vanish. The foremost of these is either the short inane sentence which means nothing but is the author’s idea of telling oratory, or the long sentence which comes to an end by the grace of God only. The short sentence has its dramatic “virtues” and also a very great “virtue,” for it cannot but be grammatical and well punctuated even when jotted down by one who is somewhat of a dolt. But the long sentence! Here we have the medical author at his best as the supreme sinner of all the canons of grammar, taste, style, usage and art. By the time he has written some ten words he has forgotten whether his subject calls for a singular or plural verb, and by the time he reaches the thirtieth or fortieth word he is gasping for breath, floundering around, using the wrong preposition, the wrong qualitative adjective, and wots not whether an adverb or adjective should be used. He is dying from sheer exhaustion and his sentence should be the inscription on his tomb. If the tomb is large enough to contain so mighty an expression of his thought and if the purity of the marble does not clash too greatly with his many “writing” impurities!

When will “medical English” improve? Critics have written mild and vituperative articles about it, have tried their best by gentle and refined suggestions to lure medical authors into the ways of the righteous, and have foamed at the mouth and have execrated them for giving the reader so many unpleasant quarters of an hour. But “medical English” bear-

ing all the family traits of years ago and even some additional ones which are even worse, goes merrily on; its detachment from what is considered the "best" English in literary works of recognized value is complete, its domain is a guarded castle with sentries about to fight off any intrusion of clarity, simplicity, or "recognized" grammar. Verily, it has come to stay; so why inveigh against what is adamantine?

HOSPITAL DAY

The setting aside of days to be recognized for some special purpose is becoming popular and, it might be said, almost fashionable. The latest to be added to the list was May 12, which was generally recognized throughout the United States and Canada as Hospital Day. The plan was suggested by *Hospital Management*, a periodical published in Chicago in the interest of hospitals. This day called attention to the anniversary of the birth of Florence Nightingale, pioneer in the modern hospital and nursing methods. Primarily, its purpose was to increase the interest of the public in the many hospital activities.

Hospitals throughout this country and Canada kept open house to the public; in many of the smaller places the day was declared a holiday and shops and business houses closed. The old-fashioned basket picnic with speeches, opening and dedicating of hospitals, breaking ground for new buildings, public meetings and distribution of Red Cross literature, are some of the ways adopted by various hospitals to call the attention of the public to hospital work.

The movement was endorsed by President Harding, General Pershing, the U. S. Public Health Service and the Surgeon Generals of the Army and Navy. The public generally were invited to visit the government hospitals and inform themselves of the needs of the disabled ex-service men. On the whole it seems that Hospital Day has been permanently placed on the calendar. There is no doubt but what it is thoroughly beneficial and that good results must follow. All such movements have for their final purpose the teaching of one thing, namely, the value of good health.

Let us hope that the interest shown in the first recognized Hospital Day will be continued, and that next year a more definite program can be worked out and that the results will be a better general understanding by the people of the value and needs of our hospitals.

BOOKS FOR LEISURE MOMENTS

*Reading with discrimination broadens the mind
and strengthens the mental grasp*

It has been said that the male novelist understands women much better than does the female novelist, and it would seem that this is the truth, judging from "Our Women," by Arnold Bennett (George H. Doran Company, New York). His "story" of women is not of the sentimental sort; it is not tinged with veneration of their impeccable qualities nor is it tinged with denunciation of their defects. Nor is his attitude toward men that of the hero-worshipper; their feet of clay give him pause. But aside from the imperfections of man and woman he has much to say about the perfections of either and perhaps it is on account of these perfections that sex-discord obtains. In one's business relations when these relations are between man and man discord occurs only too often, but fortunately, because each recognizes the perfections in the other man and allows them to swamp the imperfections so that the latter are nigh forgotten, a feeling of concord instead of discord occurs. Marriage, as Mr. Bennett points out so vividly, is a business relation, and so are courtship and in fact every relation between the opposite sexes. But while concord in the relations between man and man occurs often enough to invite favorable comment, it is so rare in the relations between the opposite sexes that it is almost negligible. Thus sex-discord, according to Mr. Bennett, and sex-antagonism, according to Walter Heape, whose book, remarkable though it be, has escaped Mr. Bennett's attention.

Sex-discord whether defined as Mr. Bennett defines it and due as he asservates to economics, or sex-antagonism as defined by Walter Heape who asserts it to be the result of the desire of one sex to gain the mastery of the other especially when the feeling of mastery is abetted by sex attraction, is a matter that has long been known but has never been so candidly stated as in these modern times. Balzac in all his novels dwelt on the sexual relations and when these were not as they should be a misunderstanding arose that could not be squelched. Balzac's views, slightly changed according to the period in which other Frenchmen wrote, have stamped themselves on French literature of the fictional sort and also on books dealing with intimate studies of the sexes. But, as Mr. Bennett points out, the question of economics never occurred to Balzac nor has it occurred in French literature to any of his successors. Whether Mr. Bennett is right in blaming economics altogether for the sex-discord is open

to argument, for if one is a disciple of Walter Heape a different view is taken. The latter sees only the matter of mastery—the keen desire of one sex to triumph over the other. The male innured to his supreme position is loth to give up one iota of it, and the female, shackled for centuries, is just as loth to resist the practice of a tyranny over man when the opportunity presents itself. In other words, the slave enjoying partial freedom abuses her freedom in a way to incur antagonism. And strange to say, according to Walter Heape, this sex-antagonism is born almost invariably of sex attraction.

To revert to Mr. Bennett's book, he has much to say on the subject in his usual brilliant manner, and in his incisive and convincing manner. With a scalpel of the keenest edge he cuts neatly into matters which most of us think infinitesimally small, but which nevertheless have a decided bearing on life. In an intimate study the little things count as much as the big things, and when the little things are set forth as they are in this book with humor tempered by a philosophy based on truth that dulls its sharp edges, we have a repast of such engaging qualities as only a man of Bennett's talent can prepare.

P. S.

We would bespeak for Mr. J. C. Squire, author of "Life and Letters" (George H. Doran Company, New York), a wide circle of readers, not only because he knows how to write but because of an erudition that is so cleverly hidden that it has all the hallmarks which cannot but make it engaging. We have had all sorts and conditions of essayists—the frivolous and "smart," the learned and monotonously serious, the propagandists with one or perhaps two theories up their sleeves the reiteration of which was most exasperating to all intelligent readers, and others who achieved some height and then fell to abysmal depths because of crotchets and conceits and decided prejudices. But in the case of Mr. Squire and his most recent book of essays we have a companion who sails along the middle stream and does it so dexterously that there is not the slightest chance of shipwreck between Scylla and Charybdis. He knows his subjects very well indeed, especially when they pertain to Pope, Jane Austen, Shakespeare, Meredith and others, but he never thrusts his knowledge to the front as a pedant would in the hope of convincing the reader how deeply he has immersed his mind in the English classics. In short, he is an artist with a judgment of rare distinction and a point of view that may not be ours, but is so unobtrusively stated that it never offends. In a book of this sort it is a difficult task to

single out the best, and by thus doing convey to the reader that the rest is second-rate. This would be doing the author a great injustice and moreover might prejudice the reader against some of the essays. But fully in accord with the foregoing thought and reluctant to be otherwise than just, we cannot refrain from mentioning with considerable emphasis three essays, namely, "One," "Natural Writing," and "The Infinitives That Were Split." And we mention these three not because they stand out boldly, on account of literary "virtues," above the others, but because we are addressing a special audience that needs the sane advice of the first two, and will enjoy reading the third on account of the author agreeing with the medical man that the most irksome thing in writing English is not to use the split infinitive. All three essays really come under the head of "Natural Writing," and who would gainsay the great advantages that accrue to any writer from a close pursuit of this most enviable art of writing English?

P. S.

It is a trite saying that there are books and books published each year, and that of the large number very few indeed are worth reading and, with the exception of those we may count on the fingers of one hand, none will be read the following year. This is a trite saying, and just because it has a grain of truth or two, a book that has unusual and striking features should give us pause, not only to read it carefully but to cogitate whether it will be read for some time, in fact consulted in years to come, or have only an ephemeral popularity, if popularity at all. We have in mind Alleyne Ireland's "An Adventure With a Genius: Recollections of Joseph Pulitzer" (E. P. Dutton & Co., New York), and we have this book in mind because unlike most books it does not depend on an adventurous life filled with hairbreadth escapes, with thrilling incidents of travel in the unusual and what is considered the manly way—with gun in hand in pursuit of the untamed creatures of the jungle—but depends only on a graphic account of the suffering days of a man dowered with a peculiar genius to master that part of the world over which he elected to reign. Joseph Pulitzer was handicapped from the time he came to this country when a very young man—he was unfamiliar with our language, his appearance and general marks of poverty were against him. But his ambition to make a name dominated his personality, though to the superficial observer his general appearance would not have indicated this enviable quality. And it was ambition that overcame all the obstacles with which he had to

contend—obstacles which would have discouraged an ordinary man. By sheer force of will power he rose above them, and if in his early years he resorted to a bit of chicanery to achieve his end, we should not be too critical in his case. What his career was in New York is an open page that is known to all who have followed the resuscitation of the *New York World* from lethargy into a newspaper representing all those activities absolutely necessary in the field of journalism, if journalism is to have a wide publicity which includes not only the intellectual man but the opposite sort who read merely for the news contained in an article. This sort of journalism is open to dispute but our space will not allow us even to touch upon so complex a problem. Nevertheless, this was Joseph Pulitzer's idea of journalism, and, be it said here, it originated with him. He knew the sphere in which he would succeed better than anyone else, and we doubt if anyone else had advised against his own ideas of journalism he would not have fared ill. At least this is the inference we gather from Mr. Ireland's book, and Mr. Ireland was one of his companion-secretaries—there were always six—on his yacht "Liberty" when stricken blind he "cruised for about eight months in the year over a course bounded by Algiers and the Piraeus, by Mentone and Alexandria, with visits to the ports of Italy, Sicily, Corsica, and Crete," and when he had the same vaulting ambition despite his affliction, the same nervous temperament, the same crotchets and impatience, the same desire for knowledge, which made his active journalistic years the butt for many a mordant criticism and for much uncalled for ridicule. But unlike the critics of that harsher world which lives outside the thoughts of others and which judges rashly and meanly altogether too often, Mr. Ireland, despite his master's peculiarities, grew to like him, even to venerate him, and the bond between them was only broken by Joseph Pulitzer's death. An unusual account is Mr. Ireland's and one that invites not only careful reading, but much cogitation. For out of the cogitation there will arise only one thought—the heroism of a very ambitious man, cut off from activity in the prime of life by an affliction that is about the worst that can visit mortal man. A goodly lesson is this sort of heroism for all, not only in the matter of facing the inevitable but also in continuing all those activities which are our wont despite a hindrance or despite hindrances. P. S.

Arnold Bennett is always worth while, and even the books which are not in the front rank of his works invite considerable friendly criticism for the reason that no matter what Bennett says and how trite it may be, the

glamor peculiar to his style of saying things is never lacking. First and foremost, Bennett is a novelist, his art is indubitably in that direction, and of secondary quality are his books on social questions and his views of philosophy as these views are applied by him to a diversity of problems which are ours today. But when we affirm that the latter are of secondary quality, we mean that they are only of secondary quality by comparison with his novels, and here our prejudices play a decided rôle, for others may be much more entertained and instructed by those books of his which are not novels. Nevertheless, on account of our admiration of this author we are willing to concede his brilliance in all his books and when an author has this rare quality, the thinnest of his books is worthy of holding the reader's attention not for a moment but for many moments. A case in point is Bennett's recently published book, "Things That Have Interested Me" (George H. Doran Company, New York), a book that contains half pages of criticism and of observation, and whole pages. The power to observe keenly is Bennett's and the talent to convey these observations to the reader with clarity and directness, and with just enough of brilliance to fall short of "smartness"—an enviable quality, to be sure—is his beyond dispute. No matter how great the variety of subjects which have fastened his thought, no matter how often others may have had like experiences and have thought the same things, though not talented enough to express themselves in printed words, the Bennett "flavor" is paramount and entrances the reader. And here it would be well to record that in the book before us the subjects cover a large area—literature, opera, housekeeping, travel, politics, war, art, education and other matters too numerous to mention—but even so Bennett holds the reins taut and drives with a dash, no matter how narrow or steep the path, to those heights where his sun plays brightest and illumines the most ragged subject until all raggedness disappears. Call the book a series of snippets from a literary workshop, call the book journealese, call it whatever you please, or agree with us that it is just as inferior to his novels as are all his other books of non-fiction, one must admit that only Arnold Bennett could have invested all these subjects with that glamor which belongs to him by right of a talent that few possess today. P. S.

INJURIES OF FEET.—U. V. Portmann and F. C. Warnshuis (*Journal A. M. A.*, April 30, 1921) have observed that the reaction to foot injury is different from the reaction to injury to other parts in that there results an unusually long period of disability quite out of proportion to the type or severity of traumatism. They consider certain points that must be understood and appreciated to develop an effective method of treatment.

NEWS NOTES

GOVERNOR HYDE has appointed Dr. Cortez F. Enloe of Jefferson City and Dr. E. E. Brunner of Carrollton members of the state board of health.

THE Frisco System Medical Association, composed of the surgeons of the Frisco Railway System, met at Springfield May 23-24, with an attendance of about 125.

ALL the physicians of Independence have signed a petition urging the people of that city to support the proposition to issue bonds to enlarge the sewerage system of Independence.

DR. CHARLES E. NORTH of New York City, an expert on the distribution and purity of milk supplies, has been employed by Kansas City to make a survey of the milk situation there.

DR. H. J. RAVOLD of St. Joseph was elected president of the Radiological Society of Missouri and Dr. E. C. Ernst of St. Louis was re-elected secretary. The society will meet in Excelsior Springs in May, 1922. The radiological papers on the program of our Association at the St. Joseph meeting were supplied by the Radiological Society.

THE American Branch of the Oxford University Press announces that the *Lancet* will hereafter be published by the Oxford University Press of London. The American subscriptions to the *Lancet* may be entered through the American Branch of the Oxford University Press, 35 West 32nd Street, New York. The subscription price is \$12.

FLYING to the annual meeting was a novelty indulged in by Los Angeles physicians attending the California State Medical Association session at San Diego last month. The planes left Los Angeles at 7 and 12 in the morning and arrived at San Diego, a distance of 125 miles, an hour and a half later. "Safer than the auto and more comfortable," said the announcement giving the schedule.

A RECENT inspection of the school children of Wellston, St. Louis County, disclosed that 36 per cent. of those examined were under-weight and 12.5 per cent. over-weight. Further tests were to be made to ascertain the percentage of children with subnormal hearing, sight and other physical conditions. It

was the first public inspection made of the school children of St. Louis County and was conducted by several welfare organizations co-operating with the state board of health.

At a meeting of the state board of health, held in St. Joseph May 25, Dr. E. P. North of St. Louis was re-elected president and Dr. Cortez F. Enloe of Jefferson City was elected secretary. The board is now composed of the following physicians: E. P. North, St. Louis; Cortez F. Enloe, Jefferson City; Franklin E. Murphy, Kansas City; E. E. Brunner, Carrollton; R. S. Vitt, St. Louis; T. A. Son, Bonne Terre; T. H. Wilcoxon, Bowling Green. A meeting for the examination of applicants to practice medicine will be held in St. Louis June 13-16.

MANY scientists lack the library facilities which their work demands. They are compelled either to journey to distant libraries or to try to borrow books by mail. Often it is difficult for them to locate something that is badly needed, and again it may be impossible to borrow it. The Research Information Service of the National Research Council is prepared to assist investigators by locating scientific publications which are not generally or readily accessible. It will also, as is desired, have manuscripts, printed matter or illustrations copied by photostat or typewriter. The cost of copying varies from ten to twenty-five cents per page. No charge is made for this service unless an advance estimate of cost has been submitted and approved by correspondent. Requests for assistance should be addressed, National Research Council, Information Service, 1701 Massachusetts Avenue, Washington, D. C.

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Armour & Co.: Suprarenalin Solution-Armour.

The Diarsenol Co.: Silver Diarsenol, 0.05 gm. ampules; Silver Diarsenol, 0.1 gm. ampules; Silver Diarsenol, 0.15 gm. ampules; Silver Diarsenol, 0.2 gm. ampules; Silver Diarsenol, 0.25 gm. ampules.

Hynson, Westcott & Dunning: Mercurochrome-220-Soluble.

Abbott Laboratories: Tablets Acriflavine-Abbott 0.46 grain.

Armour & Co.: Ampoules Pituitary Liquid-Armour 0.5 c.c.

Hynson, Westcott & Dunning: Sterile Ampoules of Benzyl Benzoate-H. W. D.

E. R. Squibb & Sons: Arsphenamine-

Squibb, Neoarsphenamine-Squibb, Sodium Arspenamine-Squibb.

THE annual meeting of the Missouri Society for Mental Hygiene was held in St. Louis on May 6, 1921, in the Bartscher Auditorium of the St. Louis Medical Society and was well attended. The principal address was delivered by Dr. Frank P. Norbury, former acting Medical Director of the National Committee for Mental Hygiene. It was a masterly presentation of the reasons why mental hygiene must have a place in the thought of every community and why organized effort will bring as salutary results as have been attained in other departments of public health.

Very helpful talks, bearing practical suggestions for immediate application, were made by Dr. Charles W. Thierry, whose work in the Juvenile Court has borne such excellent results; by Dr. C. H. Shutt, who as Hospital Commissioner, has sturdily and persistently promoted the welfare of the mentally ill; by Mr. Forrest G. Ferris, whose experience in our courts has made his advice of great value; by Dr. J. E. W. Wallin, whose work in our public schools has attracted wide attention and has been the pioneer work in Missouri toward the classification of aberrant children, and by Dr. W. H. C. Smith of Godfrey, Ill., who has devoted his life to the uplift of mental defectives.

MEMBERSHIP CHANGES, MAY

NEW MEMBERS

Bridges, A. D., Portland.
 Brockman, Clinton O., Eldon.
 Chesney, Alan M., Barnes Hospital, St. Louis.
 Claridge, Ralph A., Third National Bank Bldg., St. Louis.
 Cook, John, Central Trust Bldg., Jefferson City.
 Costello, Joseph P., 400 Lister Bldg., St. Louis.
 Cunningham, Josiah B., Ava.
 Daughtrey, Wm. T., Naylor.
 Dorsey, John J., 402 Argyle Bldg., Kansas City.
 Evans, J. Lane, Brookfield.
 Fowler, J. J., Sedalia.
 Freiday, W. G., Nevada.
 Gafney, George T., St. John's Hospital, St. Louis.
 Gay, R. J., Bowling Green.
 Gum, Wm. R., 2227 S. Broadway, St. Louis.
 Hall, C. H., Nevada.
 Horton, Wm. H., 873 N. Boulevard, Springfield.

Jackson, Lewis L., Bernie.
 Lawrence, Chas. B., Hallsville.
 Lyon, Richard C., Neelyville.
 Mitchell, R. A., Moberly.
 Motzel, Albert J., St. Mary's Infirmary, St. Louis.
 Moulder, G. A., Linn Creek.
 Ochsner, Edw. W., Barnes Hospital, St. Louis.
 Payne, Richard J., University Club Bldg., St. Louis.
 Riley, Fred P., Clyde.
 Rudolph, Royal W., Barnes Hospital, St. Louis.
 Sparks, R. A., West Plains.
 Stone, Wm. E., Columbia.
 Tibe, Matilda L., 7408 Michigan Ave., St. Louis.

CHANGES OF ADDRESS

Appleberry, Reuben, Farmington, to Bonne Terre.
 Armstrong, M. J., Mt. Vernon, to Jasper County Tuberculosis Hospital, Webb City.
 Bacon, Martha M., 1600 Tennessee, to 23 E. 13th St., Lawrence, Kan.
 Bogard, Edward, U. S. Public Health Service, to 6801 Delmar Ave., St. Louis.
 Bryant, Jewel A., Steele, to Gideon.
 Calloway, G. D., Springfield, to 4940 Bartlett Ave., St. Louis.
 Clayton, Paul B., Odessa, to care of Grace Hospital, Kansas City.
 Cole, Paul F., Ewing, to 610 Woodruff Bldg., Springfield.
 Cowherd, J. B., 207 E. 43rd St., Kansas City, to 3308 Campbell Ave.
 Cook, R. L., 3802 De Tonty St., to 1805 S. Spring, St. Louis.
 Cooper, George F., 744 Lathrop Bldg., Kansas City, to State Hospital, Camp Grant, Ill.
 Danley, W. E., Avenue City, to R. R. No. 3, St. Joseph.
 Davis, H. B., 611 Lathrop Bldg., to 712 Bryant Bldg., Kansas City.
 De Honey, F. R., Marquand, to Fredericktown.
 De Lamater, Hasbrook, Board of Health, to Phys. and Surgs. Bldg., St. Joseph.
 De Vilbiss, Edgar F., 937 Rialto Bldg., to 404 Bryant Bldg., Kansas City.
 Diveley, R. L., Waldheim Bldg., Kansas City, to 301 N. 8th St., St. Joseph.
 Dunkeson, E. B., Hatfield, to Grant City.
 Edmondson, M. T., Fair Grove, to 318½ College St., Springfield.
 Fowler, Kenneth, City Hospital, Louisville, Ky., to Ricketts Laboratory, University of Chicago, Chicago, Ill.
 Fowler, Kenneth, 4809 Drexel St., Dallas, Texas, to City Hospital, Louisville, Ky.

Freudenberger, H. C., Woodman, Colo., to 110 E. Costella St., Colorado Springs, Colo.

Funkhouser, Paul, Belleville Hospital, to 301 E. 19th St., New York.

Grainger, G. A., Caruthersville, to Belleville, W. Va.

Glenn, Joseph E., Sparta, Ill., to 958 Arcade Bldg., St. Louis.

Greene, Chas. F., Seneca, to Bakersfield.

Hammler, Christiana V., St. James, to Conshohocken, Pa.

Hanna, M. A., 744 Lathrop Bldg., to 703 Waldheim Bldg., Kansas City.

Hartigan, F. X., 710½ Felix St., St. Joseph, to King Hill Bldg.

Harmon, B. R., Landers Bldg., to 625 South St., Springfield.

Hartley, W. E., Sedalia, to 120 W. 5th St., Sedalia.

Henke, Chas. F., 900 Russell Ave., St. Louis, to 1823 Menard St.

Henson, L. L., Hallstown, to Crane.

Horst, O. C., 808 Belmont St., to 318 College St., Springfield.

Howe, Elmer D., 5130 N. Broadway, St. Louis, to Lyola Hospital, Chicago, Ill.

Hoyt, William W., Humboldt Bldg., St. Louis, to care of Morgan, Hayes & Cie, Place Vendome, Paris, France.

James, Hiram G., Rippee, to Mountain Grove.

Kelly, E. H., 822 Rialto Bldg., to 402 Wabash, Kansas City.

Kennedy, J. J., Frankford, to Soldiers' Home, Santa Monica, Calif.

Kerr, U. F., Landers Bldg., to 212½ McDaniel Ave., Springfield.

Kessler, E. B., 2236 S. 11th St., to 710½ Felix St., St. Joseph.

Knott, Minerva M., Jackson, Miss., to 214 E. McCarty St., Jefferson City.

Lester, Franklin W., Scappoose, Oregon, to Chinook, Washington.

McAmis, L. Clifford, Agnes Memorial Hospital, Denver, Colo., to Evergreen, Colo.

McPherson, O. P., 744 Lathrop Bldg., to 703 Waldheim Bldg., Kansas City.

Moss, Merton C., Metropolitan Bldg., St. Louis, to City Hospital.

Moore, R. D., Clayton, to 1547 Gaylord, Denver, Colo.

Morris, C. L., Woodruff Bldg., Springfield, to Greenfield.

Nugent, J. T., Centralia, to Jamesport.

O'Neal, W. C., Maywood, to Ewing.

O'Reilly, Archer, Metropolitan Bldg., St. Louis, to 3534 Washington Ave.

Owen, Wm. C., 3822 Folsom Ave., St. Louis, to Grand and Park.

Painter, Albin M., 1208 Wyandotte, to 3500 Main, Kansas City.

Pettijohn, A. C., Woodson Sanitarium, St. Joseph, to State Hospital No. 2.

Reynolds, S. H., 7370 Manchester Ave., to 2917 Bartold Ave., Maplewood.

Reynolds, W. T., 307 Shukert Bldg., Kansas City, to 520 Chambers Bldg.

Rhodes, E. L., Lincoln, to Warsaw.

Riley, J. B., Altoona, Kan., to Coyville.

Roach, J. F., 1634 Milan St., New Orleans, La., to 525 St. Charles St.

Rush, G. A., 2613 Brooklyn St., Kansas City, to 5511 Brooklyn St.

Schaller, F., 2242 Indiana Ave., St. Louis, to 2353 S. Broadway.

Scott, Elijah A., 1802 Victor St., St. Louis, to St. James.

Seehorn, Newton A., 215 New Centre Bldg., Kansas City, to 200 Bright Bldg.

Shank, W. L., 5221 Cates Ave., to 1023 N. Grand, St. Louis.

Sheets, Martin E., 4361 Gibson Ave., St. Louis, to 4359 Chouteau Ave.

Smith, Arthur J., Boonville, to 11a S. Boyle Ave., St. Louis.

Smith, A. S. J., 710½ Felix St., St. Joseph, to Hazel, Oklahoma.

Smith, W. A., 24 S. Gore Ave., Webster Groves, to 163 Helfenstein Ave.

Son, E. R., Osage City, to California, Mo.

Souder, L. E., Ryors, to Chamois.

Stone, C. A., Metropolitan Bldg., St. Louis, to 3534 Washington Ave.

Summa, H. H., 5703 Florissant Ave., St. Louis, to 232 Flagler Blvd., W. Palm Beach, Fla.

Vinyard, Robert, Frisco Hospital, St. Louis, to University Club Bldg.

Whipple, N. L., 3754 Wayne Ave., Kansas City, to 5830 Cherry.

Williams, N. C., Hinton Bldg., to 318 College St., Springfield.

Willman, Reinhold, 1101 Jule St., to 409½ Illinois St., St. Joseph.

Woltzen, S. W., Ulrich, to Clinton.

Wright, Ervin, Rolla, to Huntington, Ind.

Wyche, Charles, 601 Compton Bldg., St. Louis, to 640 N. Taylor Ave.

NO LONGER MEMBERS

Baker, Clark E., Rochester, Minn.

Boone, John C., Charleston.

Bryant, C. H., 519 Spring St., Independence.

Buckley, C. H., La Plata.

Chapman, Thos. E., 529 Highland Ave., Kansas City.

Dawson, Lerton V., Canadian, Texas.

Evans, E. E., East Louisiana Hospital for the Insane, Jackson, La.

Holt, Samuel W., Rutledge.

Howle, W. P., Charleston.

Isherwood, Hortense L., Carl Junction.
 Kaemmerling, G. G., Glendale, Cal.
 Kennedy, Walter U., 603 South 14th St.,
 New Castle, Ind.
 McCarty, E. D., Columbus, Ky.
 Ridings, Overton H., Meadville.
 Rohan, Francis E., Joplin.
 Spence, E. L., Pineville, La.
 Taulbee, Jackson B., Maysville, Ky.
 Wessell, W. C., Hermann.

DECEASED

Eugas, August F., Farmington.
 Howard, David F., Brookfield.
 Kolbenheyer, F., Omaha, Neb.
 Mayfield, Lee S., Illmo.
 Porterfield, Daniel L., Jamesport.
 Robinson, J. F., Nevada.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
 HAVE PAID THE STATE ASSESSMENT FOR
 ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
 Webster County Medical Society, Dec. 18, 1920.
 Livingston County Medical Society, Dec. 27, 1920.
 Montgomery County Medical Society, Jan. 6, 1921.
 Chariton County Medical Society, Jan. 7, 1921.
 Clinton County Medical Society, Jan. 8, 1921.
 Oregon County Medical Society, Jan. 22, 1921.
 Reynolds County Medical Society, Jan. 29, 1921.
 Benton County Medical Society, Feb. 3, 1921.
 Ralls County Medical Society, Feb. 14, 1921.
 Schuyler County Medical Society, Feb. 28, 1921.
 Adair County Medical Society, Mar. 11, 1921.
 Camden County Medical Society, Mar. 17, 1921.
 Pulaski County Medical Society, Mar. 22, 1921.
 Atchison County Medical Society, Mar. 23, 1921.

CARROLL COUNTY MEDICAL ASSOCIATION

The Carroll County Medical Association held its regular monthly meeting April 20 in the County Court Room at Carrollton, with the president, Dr. Musson, in the chair. The following responded to the roll call: Drs. R. F. Cook, E. H. Musson, H. B. Scovern, W. S. Windsor, I. M. Wooden, Wm. G. Atwood, E. E. Brunner, and Dr. Trotman of Norborne, visitor.

The following membership committee was appointed: Drs. Brunner, Edmonds and Cook.

The medical bills passed by the recent legislature were discussed. A motion was made by Dr. Cook and seconded by Dr. Scovern that the Carroll County Medical Association stand with and indorse the State Association in any steps it may take regarding Senate Bill No. 433. The motion carried.

The regular program consisted of a real talk on "Tonsillectomy."

The following members then discussed tonsillitis and treatment in general: Drs. Cook, Scovern, Wooden, Windsor, and Trotman.

Resolutions were adopted that examinations for county insane cases be \$5.00 instead of \$2.50, as allowed by the county court; also that violations of

this rule by any member of the County Association should be considered unethical and constitute sufficient reason for expulsion from the County Association.

The board of censors was appointed by the president as follows: Drs. Wm. G. Atwood and Harold Scovern.

The program for the next meeting will be a paper by Dr. Edmonds on "Obstetric Anomalies," Dr. Windsor to open the discussion.

E. E. BRUNNER, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, March 10, 1921, at 1:30 p. m. The meeting was called to order by the president, Dr. W. F. Chaffin, the following members being present: Drs. Adair, Chaffin, Crawford, Dodd, Elder, Overholser, Ramcy and Triplett. Anna K. Westman, public health nurse, was present as a guest of the Society.

The following scientific program was successfully carried out: Report of case of bronchitis of severe type and unusual character, by Dr. C. S. Dodd, also a Clinic by Dr. Dodd, of a case of a young man with enlarged and infected cervical glands. Both cases were of unusual interest and every one present took part in an interesting discussion.

"Team Work in the Cass County Medical Society" was the subject of a paper by Dr. T. W. Adair. He urged all members to co-operate with one another, and condemned the unethical conduct by members who professed to be members of high standing in our Society and who were not living up to the code of ethics as adopted by the American Medical Association.

Dr. J. S. Triplett led the discussion by reading a paper on "Group Practice," in which he advocated the grouping of the physicians in Cass County, and forming a clinic with a hospital in conjunction, as being a method of team work and greater efficiency in medicine. The trend of the discussion indicated a decided opinion in favor of such a move.

Under miscellaneous business, an invitation was extended to the Society by the Hurley Lee Spicer Post of the American Legion, tendering them the use of Ted McCaddom Hall for their meetings, and was unanimously accepted.

After a discussion of the status of medical legislation in the present General Assembly the following resolutions were adopted:

"Resolved that we are opposed to the passage of House Bill No. 113, and Senate Bill No. 171, known as the Chiropractic Bill. House Bill No. 360 and Senate Bill No. 333, known as the Optometry Bill, House Bill No. 288, and Senate Bill No. 433, the Medical College Bill, and that we urge our Senator, B. B. Tout, and Representative, A. W. Wilhite, to vote against and oppose these bills.

"Resolved, further, that we are in favor of the bill creating a state board of control for the management of our eleemosynary institutions, and that we have urged our Senator and Representative to support them."

H. S. CRAWFORD, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held an interesting meeting April 25, beginning with 6 o'clock dinner at the Snapp Hotel, in Excelsior Springs, eleven members participating.

The Society unanimously approved the action of the St. Louis Medical Society as to invoking the referendum on Senate Bill No. 433.

The president of our Society was instructed by

unanimous vote to tender Governor Hyde our approval of his veto of the Chiropractor's Bill.

Charges were preferred against one of our members for using the word "Specialist" on his sign, and the case referred to the censors.

Dr. J. E. Baird read an excellent paper on "Gastric Hyperacidity," in which the doctor discussed not only the subject itself, but said much in an instructive way on the various conditions which ramify into gastric neuroses. The paper was a scientific one, and much appreciated by all present. Full discussion followed, showing intense interest in the subject.

Dr. C. H. Suddarth introduced a clinical case which almost typified the subject under consideration. This patient was recovering his health and bodily weight under enormous feedings of milk and eggs, after all medicines tried by a dozen or more therapists had failed.

Dr. J. J. Gaines read a paper on "The Neuropathic Syndrome." This paper evoked little or no discussion, possibly because it contained absolutely no technical matter, but dealt exclusively with experience and reminiscence.

The next meeting will be at Smithville, the last Monday in June, noon dinner, and scientific program following. This meeting will be looked to as a profitable time as well as a delightful visit to our neighbors. Our ladies, of course, are invited. The program committee for this occasion is Drs. E. E. Peterson of Nashau and Woods and Hill of Smithville. Here's hoping for delightful weather!

J. J. GAINES, M.D., Secretary.

DAVISS COUNTY MEDICAL SOCIETY

A goodly number of the doctors of the Daviess County Medical Society met at Y. M. C. A. at Gallatin, April 19, at which time the following officers were elected:

President, Dr. J. D. Dunham; first vice president, Dr. T. E. Cooper; second vice president, Dr. Frank Hedges; secretary and treasurer, Dr. M. A. Smith; delegate, Dr. R. L. Doolin; alternate, Dr. D. L. Porterfield; reporter, Dr. N. M. Wetzel.

After some lively and interesting discussions the meeting adjourned. The next regular meeting will be held in July.

A large number of the doctors are planning to attend the State Medical meeting at St. Joseph, May 24, 25, 26.

N. M. WETZEL, M.D., Reporter.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met at Bland in Dr. C. A. Bunge's office. Upon motion of Dr. C. A. Bunge, Dr. J. J. Ferrell, of Owensville, was elected chairman. The secretary then gave an oral report of the last meeting. At the conclusion every member present again gave a hearty endorsement of the medical college bill as passed by the last legislature and signed by the government. Several members had written to the Governor and asked him to sign the bill, and afterwards had written and praised him for signing it. What the country needs is doctors that are able to practice, know how to dress wounds and treat the various infectious diseases that from time to time appear in this section of the country. The country is so sparsely settled for men to specialize.

Dr. Roland Hill of St. Louis read a paper on the surgical treatment of gall-stones and gall-bladder infections. After the reading or this paper a recess was taken and the visiting physicians were given an

auto ride in the country and entertained at supper by Postmaster John H. Jackson.

At the evening session in the opera hall Dr. John H. Lionberger of St. Louis gave two stereopticon lectures, one on the preparation of antitoxins, and one on vitamins. Both lectures were highly appreciated. Dr. Roland Hill then spoke for a few minutes on preventive medicine as far as it came under the observation of the surgeon. He said that cancer was curable if attended to in time, but after reaching a certain stage it was incurable. Dr. C. A. Bunge then asked the people present to give a rising vote of thanks to the visiting doctors for their interest in humanity. This vote of thanks was given by an unanimous rising of the audience.

Unless there will be some other applicant for the position Dr. J. D. Seba will represent the Society at the St. Joseph meeting of the State Medical Association as a delegate.

JOHN D. SEBA, M.D., Secretary.

HARRISON COUNTY MEDICAL SOCIETY

The Harrison County Medical Society met in Bethany at the office of Doctors Vandivert on April 4, with the president, Dr. W. J. Harned, in the chair. The following members were present: Drs. A. H. Vandivert, F. H. Broyles, S. D. See and W. W. Vandivert. The minutes of the January meeting read and approved. As our Society had not met since the January meeting there was no program prepared and our meeting consisted of extemporaneous talks by the members present. The Society then adjourned until our next regular meeting which will be the first Monday in May.

W. W. VANDIVERT, M.D., Secretary.

ST. FRANCOIS COUNTY MEDICAL SOCIETY

The Society met at Flat River April 21 and was called to order by Dr. Tidwell, president pro tem, in the office of Drs. Keith and Topping at 7:30 p. m. Dr. Keith was appointed secretary pro tem. Those present were: Drs. Keith, Topping, Tidwell, Whiteside, Reece, and Cecil.

There being no program the election of officers ensued and the following were elected: President, Dr. G. W. Tidwell of Elvins, vice president, secretary and treasurer, Dr. G. E. Cecil of Flat River. Dr. Keith of Flat River was elected delegate to State Medical Association; Dr. Topping alternate.

Dr. Reece of Elvins was made an honorary member of the St. Francois County Medical Society for life without the payment of dues.

Dr. M. H. Topping was unanimously endorsed by the society for the position of Superintendent of Hospital No. 4 at Farmington.

There being no further business the society adjourned.

G. E. CECIL, M.D., Secretary.

WRIGHT-DOUGLASS COUNTY MEDICAL SOCIETY

The Wright-Douglass County Medical Society met in the Masonic Hall at Ava, Thursday, May 5, at two o'clock, with the following members and visitors present: R. M. Norman, J. D. Ferguson and J. B. Cunningham, of Ava; R. M. Rogers and J. A. Fuson, of Mansfield; R. A. Ryan, of Norwood; A. C. Ames, of Mountain Grove; J. R. Davis, of Noble; C. W. Burdette, of Cardwell; and J. W. Love and W. A. Delzell, of Springfield.

The meeting was opened by the president, J. A. Fuson, and the minutes of the last meeting were read and approved.

By vote of the society, the visiting physicians from Springfield were made honorary members.

Some letters were read from the secretary of the State Association in regard to a movement to get the recent law regulating medical practice before the people of the state under the referendum, but after some informal discussion the subject was dropped without any formal action being taken.

Dr. Delzell read a paper on "The Acute Abdomen," in which some of the more common acute abdominal conditions were mentioned and the importance of early diagnosis, and operation in cases requiring it, were pointed out. It was a very profitable paper and was discussed by everyone present.

Dr. Ferguson read a paper on "Focal Infection," which was discussed by several, especially by Dr. Love.

The Society gave a vote of thanks to the Ava members for their cordial hospitality and the excellent dinner at the Ozark Hotel, and to Dr. Delzell and Dr. Love for their attendance and the part they supplied on our program.

Dr. J. B. Cunningham, who has recently located in Ava, presented his application for membership, and he was accepted.

The meeting then adjourned to meet in Norwood, Thursday, August 9.

A. C. AMES, M.D., Secretary.

BOOK REVIEWS

PULMONARY TUBERCULOSIS. A handbook for students and practitioners. By Edward O. Otis, A.B., M.D., Professor of Pulmonary Diseases and Climatology, Tufts College Medical School, Boston, Mass. Second Edition. W. M. Leonard, 1920.

So much has been said and written on the subject of pulmonary tuberculosis that it would seem the last word has been reached, yet pulmonary tuberculosis remains the great scourge of the human race and the medical profession welcomes any publication which offers hope of lessening the ravages of this disease. This is particularly true of any such publication written in easily readable style and presenting ideas not common to the great majority of text books. Such a book is this one, for its style is simple, almost non-technical, so that it could almost be made to fit as a physician's after-dinner book. It offers something different from most text books in stating that many cases of pulmonary tuberculosis can be and should be diagnosed on the strength of history and charts of temperature, pulse and weight while careful physical examination still fails to elicit positive evidence of pulmonary disease. The reviewer regrets that the author has not laid greater emphasis on this point.

The author has made free use of the maxims, aphorisms, and theses of the great leaders of thought on this subject and in so doing has not failed to "render unto Caesar the things that are Caesar's."

The book is simple, complete without being verbose, and offers a good blending of advanced thought with conservatism; a good book for the student and the practitioner.

S. H. S.

THE ROENTGEN DIAGNOSIS OF DISEASES OF THE ALIMENTARY CANAL. By Russell D. Carman, M.D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic; Professor of Roentgenology (Mayo Foundation), Graduate School of Medicine, University of Minnesota. Second ed., rev. Philadelphia and London: W. B. Saunders Company, 1920; 676 p.

Dr. Carman is so well known from his long and

studious application to work and from the great amount of material at his disposal, that a work from his pen must be expected to rank high. This work is especially to be respected because the cases of doubt could be followed to the operating table. Where mistakes were made they are recorded. The reviewer feels that we learn more from our *corrected mistakes* than from a great number of ordinary cases. This work does not place roentgenology above everything else in the examination of gastrointestinal complications. It is placed where it belongs—one of a group—in some cases, such as early cancer, possibly the leading one of the group.

The various forms of complications are illustrated. The text is concise. Chapters are devoted to: Apparatus, General Technic, Interpretation, The Esophagus, The Stomach, The Normal Stomach, Gastropasm, Gastric Cancer, Fibromatosis of the Stomach, Syphilis of the Stomach, Various Benign Tumor-Producing Lesions of the Stomach, Gastric Ulcer, Roentgenologic Aspects of Hour-Glass Stomach, Miscellaneous Gastric Conditions, The Stomach of Infants and Children, The Stomach after Operation, Gall-Stones and Disease of the Gall-Bladder and Liver, The Small Intestine, Duodenal Ulcer, Miscellaneous Lesions of the Small Intestine, The Large Intestine, Cancer of the Colon, Diverticulitis, Tuberculosis of the Intestine, Chronic Ulcerative Colitis, Chronic Intestinal Stasis and Constipation, Chronic Appendicitis, Miscellaneous Lesions and Conditions of the Colon, Pneumoperitoneal Diagnosis.

E. H. K.

1919 COLLECTED PAPERS OF THE MAYO CLINIC, ROCHESTER, MINNESOTA. Edited by Mrs. M. H. Mellish. Octavo of 1331 pages, 490 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$12.00 net.

The eleventh volume of selected papers, all of which have appeared in various journals, is in many respects similar to the ten volumes of previous years. There is, however, a larger amount of purely scientific material while the practical material is of the same general excellence which has always characterized the contributions from the splendid aggregation of medical men at Rochester.

The variety of subjects is so great that space will not permit even a partial list. There is hardly a specialist who cannot find something of interest, while the surgeon and the internist will find much value in the abundant and varied material collected between the covers of this book.

R. E. S.

MANUEL D'URETROSCOPIE. Par Robert Henry et André Demonchy. Préface Du Dr. Marion. Avec 56 Figures Dans Le Texte et 30 Figures Hors Texte En Couleurs. Paris: Masson et Cie, Editeurs, Libraires De L'Académie De Médecine 120, Boulevard Saint-Germain (V^{le}), 1920.

This little book of 113 pages is divided into eight chapters, the first chapter dealing with the indications of urethroscopy. Particular stress is laid on the contraindications in the acute lesions of the urethra, while the various subacute and chronic lesions which offer indications for such treatment are described. The history of the various instruments is given an excellent discussion, various types of urethroscopes described, and the pros and cons for the different ones given, with illustrations of the instruments. Chapter three is devoted to a presentation and description of the technique of the Demonchy instrument while a critical examination of the different types of instruments is found in chapter four. The description of the normal and pathological findings in the urethra is excellently illustrated. The many methods of endoscopy are mentioned with a detailed discussion of the various appliances used

in association with the endoscope. In chapter eight the female urethra is considered, the indications, treatments and results being given.

The book is a very excellent work on this phase of urology and which commends itself very highly to the specialist.

J. R. C.

DISEASES OF THE SKIN, by J. M. H. Macleod, M.A., M.D., F.R.C.P., Physician for Diseases of the Skin, Charing Cross Hospital and Victoria Hospital for Children; Lecturer on Dermatology, London School of Tropical Medicine, etc. With 14 colored plates and 435 illustrations. Royal 8vo. H. K. Lewis and Co., Ltd., 136 Gower St., London, and P. B. Hoeber, New York. Price, \$16.50.

This veritable cyclopedia of dermatological information is one of the most valuable additions that has been made to medical literature in recent years. Its publication was delayed for almost half a decade by the late war, but the intervening time has not been lost, for the author has not only gone carefully over every page of the manuscript and revised it, but has also added chapters on "trench foot" and similar dermatoses, the existence of which had previously been unrecognized.

Some of the illustrations have been taken from Macleod's *Histology of the Skin*, an earlier and standard work which has gained wide recognition, any many new photomicrographs have been added. All are good. The clinical illustrations also are excellent.

The sections dealing with treatment are particularly strong, sane and well-balanced.

The volume is one which will appeal to all students of medicine, and should have a place in the library of every dermatologist.

R. L. S.

ADVANCED LESSONS IN PRACTICAL PHYSIOLOGY, for Students and Practitioners of Medicine, by Russell Burton-Opitz, M.D., Ph.D., Associate Professor of Physiology, Columbia University, New York City. Octavo of 238 pages with 123 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$4.00 net.

Physiology is one of the most rapidly progressive subjects in medicine, and none the less important or interesting. To become familiar with the study, there are fundamental facts to learn by lecture just as didactic physiology is necessary and laboratory procedures are essential for a comprehensive and impressive understanding of the normal functions of life. The book before us may be recommended for the following salient features: (1) Important topics briefly outlined, with definite directions for experimentation. (2) Entire subject so divided that it may be completed in the usual allotted time. (3) Sufficient space allowed following each group of experiments for diagrams, descriptions and special information in unusual observations. (4) Experiments requiring complex apparatus and variable periods of time classified and arranged for demonstration by the instructor. For the experimental facts in physiology this manual will lend valuable assistance both to instructors and students.

P. C. S.

TRAITE DE L'IMMUNITE DANS LES MALADIES INFECTIEUSES. Par le Dr. Jules Bordet, Directeur de L'Institut Pasteur De Bruxelles et Professeur A L'Université. Masson Et Cie, Editeurs. Libraires De L'Académie De Médecine. 120, Boulevard Saint-Germain, Paris. 1290.

The author of this treatise announces his purpose in the preface: "I propose especially to contribute to the popularization of the fundamental facts of immunity, but I shall also endeavor to make it valuable

to the advanced student; it must be clear without being too brief—essential facts must not be lost in an overabundance of details. The best plan seems to me to begin with a general summary and résumé of the entire subject of immunity to familiarize the beginner with the problems and permit him the more easily to understand the complexity of particular fields."

The reviewer need add but little more than to express unstintingly his admiration for the complete success of the author in accomplishing all he had proposed to do. It is a monumental work of a master and will be a *vade mecum* for every student of this subject.

The text is in the form of lectures with numerous explanatory footnotes. Beginning with a historical survey of pathogenic bacteria infection, the author discusses natural immunity and vaccination and the causes of success and failure. The second part concerns cellular immunity, inflammation phagocytosis. The third part deals with humoral immunity, antitoxins, agglutinins, hemolysis, precipitins and cytotoxins with extensive discussions of antigens, antibodies and anaphylaxis.

It is unfortunate for the student that the author found it impossible, due no doubt to the stress of the war, to prepare an index. A bibliographical index would add greatly to the value of the work as a book of reference.

D. L. H.

L'INFECTION BECILLAIRE ET LA TUBERCULOSE CHEZ L'HOMME ET CHEZ LES ANIMAUX. Par A. Calmette, Sous-Directeur de l'Institut Pasteur de Paris. Un volume rand in-8, de 620 p., avec 30 figures et 25 planches en couleurs (Masson et Cie, Editeurs). Prix, 55 fr. net.

This is indeed an *Opus magnum* and the edition truly de luxe. It is impossible to give an adequate idea of its magnitude or a comprehensive conception of the contents in the space allotted to this review. Comprising as it does a most exhaustive review of the principal scientific work that has been accomplished throughout the world in the investigation of tuberculosis, the methods followed by the different research workers in this field, and an evaluation of their efforts, nothing but an extensive résumé of the whole book would suffice. Clarity of thought, so characteristic of the French mind, with a precision and simplicity of expression, convey the author's ideas so directly to the reader's mind that even the most complex and intricate phases of this essentially scientific consideration of the subject become easy of apprehension and comprehension, so that anyone, even with a scant reading knowledge of French, will have little difficulty in following the text.

After a few pages of interesting history and biography, this work of 620 pages is divided into four parts. The first part is devoted to the study of the bacillus tuberculosis and its methods of infection, its biology and morphology, techniques of isolation and culture, influence of chemical and physical agents upon it, and its chemical and physical constitution. The toxins of the germ and the various modifications—twenty in number—of Koch's original tuberculin and their preparation are fully exposed; the histogenesis and evolution of the tubercle, its anatomic-pathogenic types, in adults and children, are most interesting. Of special interest is Calmette's study of active and healed lesions in old persons, the frequency of the occurrence of unsuspected active lesions in, and the danger of contamination of, children when they are committed to the care of elderly persons so infected. Tuberculous infection of the different organs, including the skin with the different tuberculides, is amply considered. This part, which is replete with original ideas, observations and conclusions, is

completed with a consideration of the rôle played by heredity and predisposition.

In the second part the author takes up the study of experimental tuberculosis and tuberculous infection in animals, especially in cattle, sero-diagnostic methods and the part played by cattle in the contamination of the human race.

In the third part he considers the defensive reaction of the organism against tuberculous infection, and the scientific and laboratory methods of the diagnosis of tuberculosis and the diagnostic value and precise methods of applying the tuberculin reactions. The defensive action of the blood elements, ferments, antibodies, etc., are considered, together with specific directions for research with them.

The fourth and last part is of absorbing interest, as it deals with natural immunity and the method whereby acquired immunity is attained; the attempts that have been made to produce passive immunity by sero-therapy; and to establish active immunity in animals by vaccinating with tubercle bacilli, virulent, attenuated and modified, by physical and chemical agents. Here we find a complete description and evaluation of the principal research work that has been undertaken up to the present time in the production of immunity in cattle. The bovine vaccination of von Behring, the Tauruman of Koch and Shutz, the methods of Heyman, Arloing, Theobald Smith, Friedman, and many others, are fully set forth and their value and limitations fairly estimated; and finally the vaccination of Calmette and Guérin by "bacilles bilés."

In view of the world-wide interest that was created by the recent announcement that Calmette had discovered a method of effectively immunizing cattle against superinfection with virulent tubercle bacilli, it might be well briefly to outline his method and deductions from the use of this vaccination, as stated by him in his book. Based on former research by himself and C. Guérin, he discovered that tubercle bacilli, when cultured on a medium of potato saturated with pure bile and 5 per cent. glycerin, progressively lost their virulence so that after about 70 passages through this medium he could inoculate a calf intravenously with 100 milligrams of this culture without causing serious sickness or the production of tuberculous lesions anywhere, whereas his controls (young calves of the same age) succumbed in 28 to 35 days to an acute granular tuberculosis when inoculated with three milligrams of the same tubercle bacilli cultured on the same medium but which was not saturated with the glycerinated bile. He found that these vaccinated calves resisted superinfection although cohabiting in the same stables and exposed to the environmental contagion of cattle with open tuberculosis.

Unfortunately his experiments were interrupted by the war, but they have been resumed since then. He is convinced that he has successfully vaccinated cattle against superinfection. He proposes to extend his investigations to the vaccination of monkeys on a large scale; for this purpose it is necessary for him to secure a place in the tropics to carry on his experiments where monkeys can be secured which have not been already infected by contact with human tubercle bacilli. Without going further into his investigations, the fact that he has discovered a method of quickly obtaining an avirulent strain of bacilli which will protect cattle against further superfection, at least for a definite period, is of momentous importance, not only for the possible eradication of bovine tuberculosis but also for its possible application in vaccinating human beings against the development of tuberculous disease. The announcement of this discovery by such an acknowledged authority as Calmette will act as an inspiration to other investigators

all over the world and can but result in lasting benefit to the whole human race.

The whole book breathes the spirit of the true scientist. Impartially and with rare grace full credit is given to all investigators including the Germans who, even in ante-bellum days, were prone to claim all credit and only too frequently commercialized their scientific discoveries.

An edition in English of this scientific study of tuberculosis, the most comprehensive extant, would be welcomed in America and England by all who are engaged in the scientific aspect of the disease and in the practice of phthisiotherapy. L. C. B.

PRACTICAL DIETETICS With Reference to Diet in Health and Disease. By Alida Frances Pattee. Thirteenth edition. Revised. A. F. Pattee, Publisher. Mount Vernon, New York, 1920.

This new edition of Pattee's well-known and well-tried textbook has been revised to incorporate the latest results of research in dietetics and embraces all the latest diets of leading physicians and hospitals. The book is of particular value to nurses because it contains so many valuable recipes. Its blue and white striped cover is a familiar sight in nearly all hospitals. L. C.

COMMON INFECTIONS OF THE KIDNEYS With the Colon Bacillus and Allied Bacteria. Based on a Course of Lectures Delivered at the London Hospital. By Frank Kidd, M.B., B.C. (Cantab.), F.R.C.S. Eng., etc. With an Additional Lecture on the Bacteriology of the Urine. By Dr. Philip Panton, Clinical Pathologist, London Hospital. London: Henry Frowde, Oxford University Press, Hodder and Stoughton, Warwick Square, E. C., 4. 1920. Price, \$7.25.

Kidd states in the preface: "These lectures are deliberately rather dogmatic and attempt to define clearly certain clinical pictures and certain general principles." The reviewer is not certain but that in this one sentence is given an accurate review of the book. Kidd is dogmatic and the book as a whole is a potpourri of case reports, theories and observations. By this the reviewer does not mean to state that there is not much both of interest and importance, especially to the general practitioner and general surgeon in this work. The book has, however, very little to recommend it to the urologist. E. G. M.

TEXT-BOOK OF EMBRYOLOGY. By Charles William Prentiss, Late Professor of Microscopic Anatomy, Northwestern University Medical School, Chicago. Revised and rewritten by Leslie Brainerd Arey, Professor of Microscopic Anatomy, Northwestern University Medical School. Third Edition, Illustrated. Philadelphia and London: Saunders. Cloth, \$5.50 net.

From its first appearance this book has been one of the best in its field. Since the death of Professor Prentiss the text has been revised and rewritten by Professor Arey, his successor at the Northwestern University Medical School.

After a brief but clear exposition of maturation, fertilization, cleavage and the formation of the germ layers, the further course of development is carried through series of chick and pig embryos. The enterodermal canal and its derivatives, the urogenital system and the vascular system are treated separately in their development. After an excellent chapter on histogenesis, the morphogenesis of the skeleton and muscles and of the central and peripheral nervous systems completes the book.

In most text-books on embryology one is struck by a lack of continuity in presentation of the material, due perhaps to the complexity of the subject and to the fact that a complete series of young hu-

man embryos does not exist. This criticism is perhaps the only valid unfavorable one that can be made of the present book. The illustrations are numerous and excellent. Some classical pictures are reproduced from the literature. The large number of pictures of reconstruction adds greatly to the clearness of the book.

E. T. G.

PRACTICAL PSYCHOLOGY AND PSYCHIATRY. By C. B. Burr, M.D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases; Member of the American Medico-Psychological Association, of the American Medical Association, of the American Neurological Association; Fellow of the American College of Physicians; Foreign Associate Member of Societe Medico-Psychologique of Paris, etc. Fifth Edition. Revised and enlarged with illustrations. Philadelphia, 1921. F. A. Davis Company. Price, \$2.00.

"This book is 'for use in training schools for attendants and nurses and in medical classes, and as a ready reference for the practitioner.'" The fact that it has reached the fifth edition is evidence enough of its value. It is divided into six parts. Psychology and general psychopathology are treated in a safely conservative manner. In the second part the writer considers symbolism both as inherent in language, and also with reference to individual experience. The third part treats of systematic psychiatry, the classification used being approximately that of the American Medico-Psychological Association. The fourth and fifth parts are on the management of cases, by physicians and nurses. These chapters show clearly the results of the author's experiences, and deserve careful reading. Possibly too much space is given to constipation and not enough to occupational therapy. The last part is on prophylaxis, and is a good but brief treatment of the subject.

E. T. G.

A MANUAL OF SURGERY, FOR STUDENTS AND PHYSICIANS. By Francis T. Stewart, M.D. Formerly Professor of Clinical Surgery, Jefferson Medical College; Surgeon to the Pennsylvania Hospital. Fifth edition. Cloth, 1,086 pages with 590 illustrations. Price, \$10.00. Philadelphia: P. Blakiston's Son & Co., 1921.

Stewart's surgery has attained the dignity of a fifth edition. The reason for this is to be found in the brief, clear text and the adequate illustrations. The illustrations must be good, for they are copied from popular sources. The text is hardly detailed enough for the practitioner, but the student prepared enough should find sufficient detail.

A. E. H.

ELECTRO-THERAPEUTICS FOR PRACTITIONERS. By Francis Howard Humphris, M.D. Illustrated. Second Edition, Revised and Enlarged. Publishers: Oxford University Press, American Branch, 35 W. 32nd St., New York. Price, \$7.50.

It does one good to read a book that takes up each modality and describes it completely with the diseases for which it is used, as does this author. The chapter on static electricity is particularly good. He explains the machine and all its parts and then takes up the different currents possible to obtain from it. The galvanic and faradic currents are not however given the attention that the reviewer believes they deserve. The galvanic current can be used for so many things that it should be classed as one of the most essential.

The treatment of radiotherapy is neither new nor startling, but each disease receives very careful attention. The omission of the author's technique is a fault that should be corrected in subsequent edi-

tions for it is hard to follow any author who omits this very important part.

In the back of the book the author takes up diseases in their chronological order and then designates the form of electricity best suited for their treatment.

All in all the book is wonderfully well written and well worth perusal by anyone who is interested in electrical therapeutics.

M. B. T.

THE PSYCHOLOGY OF THE SPECIAL SENSES AND THEIR FUNCTIONAL DISORDERS. By Arthur F. Hurst, M.A., M.D., Physician and Neurologist to Guy's Hospital. Oxford University Press, American Branch, 35 W. 32nd St., New York. Price, \$5.00.

These lectures, delivered immediately after the war, and while all the incidents recited and the conclusions arrived therefrom were fresh in mind, give an extremely valuable addition to our knowledge of the hysterical, or psychic, exaggeration of actual organic disability and its prolongation for a long period beyond the recovery of the tissue damage. Doctor Hurst was fortunate in having a very wide experience, and the aid of very alert and able colleagues and unlimited hospital facilities. He has pursued the study of this type of nervous disability through the after-the-war period and has given us in this small book some lessons of extreme value not only in the practice of neurology but in the practice of general medicine.

We ourselves, he has shown, are often responsible for psychic disabilities and he tells us how to avoid their production and how they may be cured.

M. A. B.

PRACTICAL CHEMICAL ANALYSIS OF BLOOD. A Book Designed as a Brief Survey of this Subject for Physicians and Laboratory Workers. By Victor Caryl Myers, M.A., Ph.D., Professor of Pathological Chemistry in the New York Post-Graduate Medical School and Hospital. Illustrated. St. Louis: C. V. Mosby. Price, \$3.00.

Your reviewer watched these studies as they appeared in the *Journal of Laboratory and Clinical Medicine* and purchased the book immediately on its publication. Hence his opinion of the book was already formed when asked for this review.

The significance of the book lies in the fact that it interprets later researches in blood chemistry to the practical physician. That there is need of work in blood chemistry in our actual practice has been growing more and more evident. We have been realizing only too keenly the limitations on our methods of diagnosis. And we have realized that a better knowledge of the constitution of the blood would extend our field of activity. This Myer's book seems to do.

Its clinical references help also to make plain the author's more abstract discussions.

The book is printed on highly calendered paper and makes a good impression on the casual reader.

G. H. H.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ACRIFLAVINE-HEYL.—A brand of acriflavine (see New and Nonofficial Remedies, 1921, p. 22). Heyl Laboratories, New York.

PROFLAVINE-HEYL.—A brand of proflavine (see New and Nonofficial Remedies, 1921, p. 23). Heyl Laboratories, New York.

CALCIUM CACODYLATE-IPCO.—A brand of calcium cacodylate (see New and Nonofficial Remedies, 1921, p. 50). Intra Products Co., Denver, Colo.

DUBOIS IODOLEINE, INJECTABLE, AMPOULES, 2 C.C.—

Each ampoule contains 2 c.c. of DuBois iodoleine (see New and Nonofficial Remedies, 1921, p. 153). David B. Levy, New York.

TINCTURE OF DIGITALIS FAT-FREE-SQUIBB.—A biologically standardized fat-free tincture of digitalis corresponding in drug strength to the U. S. P. tincture of digitalis. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, March 5, 1921, p. 655).

SOLUTION ARSPHENAMINE-LOWY 1 PER CENT.—An aqueous 1 per cent. solution of arspphenamine, possessing the proper degree of alkalinity. The solution is supplied in ampoules containing 40 c.c. (0.4 gm. arspphenamine) and 60 c.c. (0.6 gm. arspphenamine). These ampoules should not be used after the date stamped on the label of each package or if the degree of coloration of the solution is greater than that of a control tube which accompanies the package. A sterile needle for intravenous injection and sterile rubber tubing accompanies each ampoule. The Lowy Laboratory, Inc., Newark, N. J.

AMPOULES PITUITARY LIQUID-ARMOUR 0.5 C.C.—Each ampoule contains 0.5 c.c. pituitary Liquid-Armour (see New and Nonofficial Remedies, 1921, p. 222). Armour & Co., Chicago, Ill.

TABLETS ACRIFLAVINE-ABBOTT 0.03 GM.—Each tablet contains 0.03 gm. acriflavine-Abbott (see New and Nonofficial Remedies, 1921, p. 21; *Jour. A. M. A.*, March 26, 1921, p. 859).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: White's Wonder Worker (W. W. W. Medicine Co.), falsely represented as an effective remedy for malaria, rheumatism, syphilis, all kidney and liver complaints, female diseases and a number of other things. Kar-Ru and Gon-Nol (Kar-Ru Chemical Co.), the first falsely represented as an effective remedy for rheumatism, kidney, liver, bladder and stomach troubles, mental and physical debility, blood diseases and irregular menstruating; the second fraudulently represented as an effective remedy for gonorrhea. O-Zo-Nol (Ozonol Chemical Co.), falsely represented as an effective cure for eczema and all eruptions and diseases of the skin, nasal catarrh, sore throat, erysipelas, croup, piles and earache. G. S. Remedy, falsely represented as an effective remedy for pellagra, rheumatism, indigestion, malaria, stomach, liver, kidney and bladder diseases and syphilis. Gon-Nor (Occidental Medicine Co.), falsely represented as an effective astringent in acute and chronic gonorrhea, urethritis, etc. Methyloids (Frederick Stearns & Co.), falsely represented as a successful treatment for gonorrhea and its complications. B-I-F Combination and B-I-F Capsules (Hollander-Koshland Co.), both represented as an effective remedy for gonorrhea, gleet and disorders of a similar nature and origin. Brsco (Brsco Medicine Co.), falsely represented as a treatment for tuberculosis, bronchitis, Spanish influenza, hay fever, asthma and ordinary coughs and colds. Sulpho-Saline Still Natural Mineral Water (Excelsior Springs Mineral Water and Bottling Co.), falsely represented as an effective cure for stomach troubles, headaches, jaundice and vertigo (*Jour. A. M. A.*, March 5, 1921, p. 671).

MORE MISBRANDED VENEREAL NOSTRUMS.—The following preparations, sold for the treatment of venereal diseases, have been the subject of prosecution by the federal authorities, chiefly because the therapeutic claims were held to be false and fraudulent: Orion Pearls S. and C. Compound (American Drug-gists' Syndicate), capsules containing essentially a mixture of oils and resins, including cinnamon, santal, copaiba and probably buchu and sulphurated fixed

oil. Antiseptic Powder (Henry S. Wampole & Co.), consisting essentially of boric acid and alum with traces of volatile substances including methyl salicylate and indications of menthol. Depurativo D. C. (R. A. Delgado Carbonell), consisting essentially of potassium iodid, unidentified plant extractives, alcohol and water. Gonocol (National Drug Co.), essentially a watery solution of zinc sulphate, hamamelis water and a small amount of alcohol, with 0.38 grain iodine and 0.38 grain iodine and 0.36 grain protein to each fluid ounce.

BOUCHARD PILLS (MARTIN RUDY), consisting essentially of iron sulphate and resins, with a small amount of oil or cubebs. Some injection tablets in the same package consisted essentially of zinc sulphate and potassium permanganate. Perlas Urinales-Antisepticas (G. J. Fajardo), containing methylene blue, cubebs and nutmeg. Metilol (Logan Pharmaceutical Co.), tablets consisting essentially of hexamethylenamin, nutmeg and cubebs. Montauk Santal Comp. (G. J. Fajardo), capsules containing oils, including sandalwood oil (*Jour. A. M. A.*, March 12, 1921, p. 743).

WOODS' TOBACCO HABIT CURE.—On February 24, 1921, the Postmaster General issued a fraud order against Edward J. Woods, Inc., exploiters of drink and tobacco habit cures. Woods' cure for the tobacco habit was analyzed in the A. M. A. Chemical Laboratory some years ago and it was found that among the tablets that constituted the treatment there were some of asafetida and methylene blue. The purchaser was told that one of the signs of a cure was that of offensive-smelling perspiration and a strong odor from the bowel excrement, while the "greenish color" of the urine was "proof positive" that the tobacco poisons were being eliminated through the kidneys. The government's case dealt only with this alleged cure for the tobacco habit, but as the fraud order has been issued against Edward J. Woods, Inc., it will have the effect of putting the Woods' "drink cure" out of business also. It was also brought out that the directions now being sent out with the treatment now contain no admonition to watch for favorable signs, but the ingredients which manufacture those signs were still retained in the treatment (*Jour. A. M. A.*, March 19, 1921, p. 811).

MODIFIED SALICYLIC ACID AND SAMARIN.—In general the pharmaceuticals of Frank S. Betz Co., Hammond, Ind., are non-secret in composition. However, Modified Salicylic Acid and Samarin are described in the Betz catalogue without information concerning their composition. In view of this and because the claims made for them seemed questionable, the A. M. A. Chemical Laboratory analyzed these preparations. Both of these preparations are marketed in the form of tablets. Each tablet of Modified Salicylic Acid was found to contain approximately 4.8 grains acetylsalicylic acid and about 0.5 grain each of gypsum and starch, with a trace of talc. Each Samarin tablet was found to contain about 2 grains acetanilid and nearly 1.5 grain salicylic acid, probably in the form of calcium salicylate. The tablets were uncoated and colored green throughout, and the acetanilid was not declared on the label as is required by law (*Jour. A. M. A.*, March 26, 1921, p. 883).

MANGANESE.—Investigations of Reiman and Minot demonstrate that ores containing manganese as oxides and silicates are soluble in gastric juice; that manganese is absorbed in the blood stream and again eliminated quickly, and that even prolonged feeding of large amounts of manganese ore to dogs failed to produce significant changes in the manganese content of the blood and tissues or to cause any pathologic symptoms (*Jour. A. M. A.*, March 26, 1921, p. 867).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., JULY, 1921.

NUMBER 7

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3529 Pine St., ST. LOUIS, MO.

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ORIGINAL ARTICLES

THE DIAGNOSIS AND TREATMENT OF BRAIN TUMORS*

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ST. LOUIS

Those of us who have devoted ourselves to neurosurgery feel that the time has at last arrived when this work has attained the dignity of a specialty and is so recognized. Hitherto cases coming under this category have been handled by general surgeons with results that have been disheartening, but now there is a group of men specially trained to do this work scattered throughout the country and much more rapid strides are being made. The range of work has increased to such an extent that conditions never dreamed of as having surgical possibilities are being treated. But the center of the field for the neurological surgeon must ever remain the study and treatment of brain tumors, for up to the present time and probably for a long time to come this group of cases presents the most difficult, and at the same time most fascinating, problems. I am one of those who firmly believes that a surgeon must be able to make his own diagnosis and should not set his operative indications as a result of what an internist tells him, though he should, of course, show him every possible deference. While this is true of abdominal diagnosis it is far truer when applied to intracranial conditions. I often tell my students that the neurologist, or as I like to call him, the medical neurologist, feels fairly well pleased with himself when he has made the diagnosis of a brain tumor, but though he may enjoy the mental gymnastics which a localizing diagnosis often requires this added effort is not essential for his peace of mind, but the neurological surgeon cannot rest until

he has exhausted every possible means of arriving at a focal diagnosis.

I propose, therefore, to take up some of these refinements in diagnosis which I believe the neurological surgeon must employ in order to get the best results.

First of all there are certain points in the history that need to be investigated with greater care than in any other condition I know of. The sequence of symptoms often is of vital importance, for in this way it may be possible to determine where a lesion has started. The first focal symptom a tumor produces arises from that portion of the brain which is first involved and many or all subsequent symptoms are due either to involvement or pressure upon adjacent regions. There is one exception to this statement. A tumor may start in a silent area and not produce any focal symptoms that we are able to recognize. Only when an area becomes involved which gives rise to recognizable symptoms are we able to determine the location of the lesion. The regions of the brain offering the greatest difficulties in this respect have been the temporal lobe and the right frontal lobe, but I shall hope to show later how some of these difficulties may be overcome. Many examples might be given to illustrate this point; one, however, will suffice. A patient while working in a field suddenly became unconscious; during this period he had a focal convulsion involving one arm and leg. From this time on he complained of headache and vomiting, and at his first examination upon admission to the hospital besides the general signs of intracranial pressure he showed evidence of pyramidal tract involvement on one side, that is, spasticity and pathological reflexes. All the facts seemed to point to a lesion pressing upon or involving the motor area. A more detailed history, however, developed the fact that for many years prior to his convulsions he had constantly spoken of hearing voices and people talking about him. His wife verified this statement. As a result we concluded that this patient's lesion had begun far back in his tem-

*Read before a meeting of The Fulton County Medical Society, March 17, 1921, Atlanta, Ga. Repeated before a meeting of the Nebraska Chapter of the Alpha Omega Alpha Society, March 25, 1921, Omaha, Nebraska. Illustrated by lantern slides.

poral region and had gradually spread forward and involved his motor area. The operation was carried out over the posterior portion of his temporal lobe instead of over his motor area. A tuberculoma was removed from the cortical center for hearing. In this case the history gave us the essential information which made it possible to remove his lesion successfully. This case also illustrates the importance of investigating in every neuro-surgical case the question of subjective sensations. By subjective sensations I mean, of course, perverted sensations of smell, taste, hearing, or vision. Great caution must be exercised in the interpretation of these symptoms, since suggestion could very readily lead one astray. The questioning must be very guarded and the patient must not suspect for an instant the purpose of one's inquiry.

Headache is a very constant almost invariable accompaniment of brain tumors and it has often been suggested that it might be of localizing value. In my experience, however, there is little help to be obtained from this symptom. Until we know what causes headache I fear this must remain a closed book. I believe that tension on the dura is an important factor and that the fifth nerve is particularly concerned. From time to time a case is observed which strengthens one in such a belief. A patient suffering with intense headaches was found to have a calcified nodule in her falx cerebri. Believing this to be a calcified portion of a dural endothelioma I operated upon her and removed the nodule. She has been free of headache since then. This case has suggested to me that anything which interferes with the free expansion of the dura might be a factor in producing headache. Patients with cerebellar tumors commonly complain of supraorbital headache and this I think is readily explained by the fact that there is a pull or pressure on the fifth nerve as it leaves the pons in the posterior fossa.

Of the various aids in making a focal diagnosis no one is of greater value than a careful study of the perimetric fields. This examination is of such vital importance, as it may give one the clue to the entire case, that I am never satisfied until I have had my own assistant take the eye fields; for most ophthalmologists have not the time to take a detailed field and that is the only kind of examination that is of value in a difficult case. It not infrequently takes several hours to take such a field. We have given up taking color fields as was first suggested by Cushing and now only take the fields with different sizes of white discs. It has been shown that whereas an individual may have a normal perimetric field when taken with an object 1 cm. in diameter, a marked defect may be detected if a minute disc less

than a millimetre in diameter is used. There are tumors in certain portions of the brain whose location can be determined by the perimetric fields. In some cases the only localizing sign may be a defect in the field while in other cases the field defect is an important aid in diagnosis though there may be other localizing signs or symptoms. A bitemporal hemianopsia, that is blindness in both outer fields, practically always means a pituitary lesion.

A homonymous hemianopsia always means a lesion in one optic tract behind the chiasm; while a subjective visual disturbance combined with a homonymous hemianopsia places the lesion in the visual cortex in the occipital lobe. By a subjective visual disturbance I mean that the patient describes visual disturbances the existence of which we cannot prove or disprove, we must take the patient's word for it.

The temporal lobe is usually considered a silent area. Lesions in this area have caused us much concern, but since we have learned that that portion of the retina with which we see the upper and outer field is supplied by fibres which pass through the temporal lobe on their way from the chiasm to the occipital lobe, we have a means of recognizing some lesions of the temporal lobe that have hitherto been unlocalizable.

The differential diagnosis between headaches due to brain tumors and those due to accessory sinus disease has always been a difficult one, and rhinologists and neurosurgeons have found this subject a fruitful one for discussion. Patients with sinus disease occasionally show changes in the eye grounds which have been relieved by operation on the sinuses. Some ophthalmologists have stated that this eye condition which had been cured was a choked disc, and to this assertion neurosurgeons have made strenuous objection, for they claim that choked disc is only produced by increased intracranial pressure and there can be no such increased intracranial pressure with a sinus infection. As I view the question it seems to me this difference of opinion is due to a confusion of terms and a misunderstanding as to the etiology and pathology of certain eye changes.

An infection of the sinuses may extend through the thin bony wall and involve the optic nerve in the inflammatory process bringing about inflammation of the nerve, a true optic neuritis, while increased intracranial pressure produces a choked disc. I believe that in the early stages a choked disc and optic neuritis look ophthalmoscopically alike and for this reason confusion has arisen.

A very recent addition to our diagnostic armamentarium has been furnished by Dandy—pneumoventriculography. The method is too

new to permit one to say how valuable it is and what its ultimate place in intracranial diagnosis will be. We have all seen new methods enthusiastically received and widely heralded when first introduced. I have come to accept new methods slowly and with great caution, as I have so often seen the early enthusiasm somewhat overdone. My experience with this method has made me feel that it is not without its dangers and its misleading features and therefore I only use it where other safer methods of examination have failed. I do not feel that every suspected case of tumor should have a pneumoventriculogram.

Another method that I feel, however, should be made use of in every case is the X-ray. There are only a limited number of cases in which it is of real value, but one never can know beforehand when the diagnosis may be strikingly confirmed by the X-ray. I have stereoscopic plates taken in every case and study the plates myself with the roentgenologist. A special technique is necessary, for the position of the patient's head on the plate is of great importance. The plate may reveal the following points:

First: General signs of increased pressure. The appearance of a so-called pressure skull is characteristic. The areas of convolutional atrophy are due to thinned bone at the site of the convolutions.

Second: The sutures may be separated in children or young adults.

Third: The conformation of the dorsum sellae may be significant; when there is general increased pressure the dorsum sellae may be thinned and pressed forward while in lesions originating in the sella turcica—pituitary tumors—the dorsum is pushed backward. In very advanced cases the dorsum may be completely destroyed. A large deformed sella is, of course, noted in cases of pituitary tumor though this is not always the case, for the tumor may lie above the pituitary fossa.

Fourth: In tumors in the cerebello pontine region, particularly acoustic nerve tumors, comparative studies of stereo plates of the right and left sides may reveal an enlarged internal auditory meatus. These plates are the most difficult of all to take and require a most painstaking technique.

Fifth: In a few cases there may be a tumor shadow due to calcified deposits in the tumor. When this is found it is of great value and importance.

I come now to the second part of my paper, namely, the treatment of brain tumors. The ultimate purpose of all treatment must be the cure of the patient, but where that is not possible, the alleviation of symptoms and prolongation of life should be our aim.

In the treatment of brain tumors we must

recognize that a certain number of cases cannot be permanently cured but merely can be relieved. It remains, therefore, for the surgeon to decide in which cases he should carry out a palliative procedure and in which cases he should attempt a radical cure. We have passed through some interesting phases on this point. In the early days of neurological surgery no distinction was made between these two groups of cases and in every case an attempt was made to remove the tumor. These early attempts were in many cases very unsatisfactory. If not actually followed by death patients were left with great disfiguring defects due to the lack of understanding on the part of the surgeon how to deal with increased intracranial pressure, or due to his not planning his operation in such a way as to cover a cerebral hernia by strong muscles. About this time Cushing appeared on the field with his subtemporal decompression operation and this operation was substituted by some in every case of brain tumor for the earlier radical operations. We are just emerging from that era, for though the subtemporal decompression operation has a great field of usefulness, we do not perform it nearly as often as five years ago. We now again are attempting the radical removal of tumors but with much greater success because of great advances in our technique. The two great advances have been, first the realization that the proper handling of cerebrospinal fluid made what might be a difficult operation a comparatively easy one, and second, the use of deep X-ray therapy or radium after an operation.

The subtemporal decompression operation to my mind should only be performed in those cases of brain tumor in whom no localization of the lesion is possible and in those cases of localizable brain tumors as a preliminary step before a radical operation is undertaken. This last mentioned field of usefulness is a very great one, for occasionally a patient has such marked pressure symptoms that an extensive operation cannot be undertaken at the outset. These patients may be gotten into better condition by a preliminary decompression. Some tumors greatly deform the brain and the sudden readjustment of such a brain after a tumor removal may bring on a disaster, while if the readjustment is slowly brought on by a preliminary decompression a successful outcome may be obtained. It is very necessary when doing such a preliminary decompression to do it on the side of the tumor, for if it were done on the opposite side the deformity of the brain would be increased rather than decreased.

In doing a decompression in a tumor case, dealing with the increased pressure conditions in the skull is very important. The dura should

never be opened until the intracranial pressure has been reduced, for if a tense dura is opened the brain tissue will immediately prolapse and frequently rupture, leading to a most alarming condition. The pressure may be reduced in one of two ways. The quickest and simplest way is to withdraw cerebro-spinal fluid from the ventricle and this may be done through the inferior horn of the ventricle or through the frontal lobe. At times, however, this is extremely difficult to do, as the ventricle on the side of the tumor may be completely collapsed and contain no cerebrospinal fluid. In such cases I withdraw fluid from the opposite ventricle. There are certain cases, however, in which not enough cerebrospinal fluid is obtained to reduce the intradural pressure. In such cases we now have another method first pointed out by Weed and McKibben which seems fraught with little danger and is most effective, namely, the intravenous injection of hypertonic salt solution, 30 per cent. in strength. One of my assistants, Mr. Malone, has been carrying out some experimental work on this line and we have come to the conclusion that if slowly administered, not more than $1\frac{1}{2}$ c.c. per minute, this concentrated salt solution has no harmful effects. Another assistant of mine, Dr. Belcher, published with me some clinical observations on the use of this method in reducing intracranial pressure.

The radical operation for removal of a tumor if it is in the cerebrum should be done by turning down a large osteoplastic flap so that ample room is afforded for manipulation in the intracranial cavity, while if the tumor is in the posterior fossa extra- or intracerebellar we do a so-called suboccipital exposure. In doing these extensive operations the patient's condition must be followed with great care by frequent blood pressure readings. If these show a tendency to fall it may be necessary to divide the operation into several stages, at the first stage merely to make the bone flap and leave the tumor removal for the second stage. At times these operations have to be done in even more than two stages. One of the serious features of a tumor removal may be the subsequent edema of the brain, for brain tissue on account of its peculiar physical properties is more prone to edema than any other tissue in the body. We have several ways to combat this, one is to combine with the radical operation a decompression operation. This is accomplished by removing bone at the base of a bone flap under the temporal muscle. Another method that may prove of great value is either the administration of hypertonic salt solution or the withholding of all hypotonic solutions after operation or the combination of both, for it has been shown that whereas hypertonic salt shrinks the brain volume, hypo-

tonic solutions even when given via the intestinal tract have the opposite effect and thus increase the tendency to edema. Another very important factor that must be considered is the anesthetic. In the past two years there is an increasing insistence on the use of local anesthesia for such operations on the ground that the operative procedures are safer. I feel personally that the skill with which a general anesthesia is administered is an important determining factor. An operation of this sort under local anesthesia is a great ordeal for a patient. The proper cooperation of the patient for the successful carrying out of such a procedure is essential. Brain tumor cases often are not able to give this, for their disease makes them abnormal. Because I have the good fortune to have the services of an excellent trained anesthetist I have not felt the need of using local anesthesia except occasionally, but I have an open mind on the question and may find that I shall swing more and more to this point of view.

The most recent and promising addition to our methods of treatment is the X-ray and radium. It is too early to express a final opinion on this subject but it seems from the cases thus far reported that the application of radium or X-ray after a tumor removal through a decompression opening helps to inhibit the growth and possibly to destroy the remaining vestiges of a tumor that has been removed.

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RADIOTHERAPY IN NON-MALIGNANT GYNECOLOGIC DISEASES*

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ST. LOUIS.

It has been only a few years ago that we were engaged in lively discussions as to whether or not there was any real therapeutic value in either X-rays or radium. To-day this question is no longer before us for argument; and on an occasion like this, only the achievements of the new methods need be enumerated. Gynecology has probably derived more benefit from radiotherapy than any other branch of medicine. In this special field the sphere of its usefulness is exceptionally wide and its influence has had a far-reaching effect both in malignant and non-malignant diseases. It is the latter class of cases that has been assigned to me in this symposium.

I will first speak of the so-called chronic metritis with which every practitioner is familiar. This condition produces in women at or near the menopause abundant and protracted

*Read before the St. Louis Medical Society, March 1, 1921.

hemorrhages which may resist every mode of treatment. Ergot and other styptic drugs, cauterization and curettage of the uterus, even if repeated, have often only a temporary result; the patients lose ground from the continued and copious loss of blood, and not infrequently a hysterectomy has to be performed for vital indication. This state of affairs has been completely changed since radiotherapy has been applied in these climacteric hemorrhages, and all observers agree that by its use the bleeding can be checked with almost absolute certainty. Radium accomplishes the desired result more quickly than the X-rays, but by either of the two agents a cure can be brought about in almost 100 per cent. of the cases. In computing a large number of very extensive statistics, it may be stated that a single application of radium or a single series of X-rays was sufficient in 95 per cent. Of the remaining 5 per cent., recurrences occurred in about 3 per cent., necessitating a repetition of the radiotherapeutic measures, and failures were noted in 2 per cent. I shall later analyze these recurrences and failures and attempt to show how they may be prevented.

At this point it is of the utmost importance to bear in mind that these so-called climacteric hemorrhages, or indeed all aggravations of menstrual bleeding in women of 40 or over, may, and often do, cover up a beginning malignancy within the uterus; and it is therefore absolutely necessary that every radium or X-ray treatment should be preceded by a curettage and the microscopic examination of the scrapings. Only if the latter reveals no evidence of malignancy or if the output of the curettage is plainly benign, may radiotherapy be employed. Otherwise operation alone is justified.

The second principal field for radiotherapy in non-malignant gynecologic diseases is in the treatment of fibroids. Until within the most recent past, the treatment of fibroids has been exclusively surgical, and the results achieved have been eminently satisfactory. Every decade has seen a material reduction in the mortality after operations for fibroids, but even in the hands of excellent surgeons there is yet an average mortality of from 3 to 5 per cent., and if we consider all the cases operated upon, we would probably find a considerably higher percentage. Contrast with this the fact that radiotherapy has a mortality of 0!

To be sure, the word "cure" means something different in the two methods. We obtain a cure after operation, if we remove the fibroid and the patient survives and is well thereafter. In radiotherapy, on the other hand, we aim only at a *clinical* cure, that is to say, the object to be accomplished is attained, if the menorrhagias caused by the fibroid either cease alto-

gether (amenorrhea) or only a scanty and infrequent menstrual flow (oligomenorrhea) ensues; furthermore, a reduction in the size of the tumor is a part though not an essential one, of the clinical cure after radiotherapy.

With these definitions in mind we must approach the statistics thus far published. Many thousands of cases of fibroids have already been treated with radium or X-rays, and the results obtained show on the whole a marked similarity. In order not to burden the reader with too many figures, only the collective statistics may be cited which are given in a recent monograph by Gauss and Friedrich. In 2,982 cases of fibroids treated with X-rays, there were 95.6 per cent. cures and 4.4 per cent. failures. In 944 fibroids treated with radium there were 94.4 per cent. cures and 5.6 per cent. failures.

These statistics take into consideration the results obtained in various parts of the world and they include the cases in which the technique had to be first acquired as well as those in which the technique had attained its present state of refinement. If only the latter kind was tabulated, Gauss and Friedrich found that in 425 fibroids X-ray treatment yielded 98.4 per cent. cures and had only 1.6 per cent. failures; and exactly the same result was obtained in 372 fibroids treated with radium.

To repeat, we have here a mode of treatment for fibroids which carries with it no mortality and brings about a cure in 98.4 per cent. of the cases. These figures so far exceed our keenest expectations of the curative value of radiotherapy in this kind of cases, that the sceptical discussions of former years may well be considered settled definitely.

But—and this is a very big BUT—such amazing and well nigh perfect results can be obtained only if certain premises are fulfilled.

To begin with, the technique must keep abreast of all advances made. The therapist must not only be familiar with the theoretical and practical principles of radiotherapy, but he must also have at his disposal a modern X-ray apparatus which will enable him to send a sufficiently large amount of hard rays into the depth of the pelvis to the ovaries. For it should be borne in mind that the effect of the X-rays in fibroids as well as in climacteric hemorrhages, is primarily exerted upon the ovaries. Here the epithelial elements, that is, the primordial follicles and their derivatives are destroyed by the rays. Thereby a bloodless castration is produced which causes an artificial menopause and, in its further action, an involution of the fibroids. The cells of the tumor itself may be affected somewhat by the rays but not to any great extent. In the event that radium is employed, the amount, filtration, location and duration of application determine

the degree of success obtained. The mode of action on the part of radium is essentially identical with that of X-rays. It seems, however, that the radium, in addition, exerts a more direct influence upon the endometrium and perhaps also upon the tumor cells. The combined application of radium and X-rays which was first suggested by French writers, seems to give the most decisive results, but the figures obtainable are as yet too small to be compared with those quoted from Gauss and Friedrich.

An important factor in obtaining prompt results and avoiding failures (this applies equally to the treatment of climacteric hemorrhages) is the time at which radiotherapy is given. Driessen, Seitz and Wintz, and several others have shown us that radium or X-rays should be applied soon after the menstruation. If the treatment is delayed until the second half of the intermenstrual period, a return of the bleeding for one or more months cannot be prevented.

The second premise to be observed, is the proper selection of cases for radiotherapy. *Neither X-rays nor radium can be used in every case of fibroid.* In other words, the marvelous results pointed out above can be expected only if the contraindications which have been evolved empirically, be carefully weighed.

Fibroids which extend above the umbilicus must be excluded. Large pedunculated subserous or submucous fibroids are likewise unsuited. In these three categories, radiotherapy may produce a necrosis of the tumors. Cervical fibroids are refractory to radio-active treatment. Rapidly growing fibroids suggestive of sarcomatous degeneration; suppurating or gangrenous fibroids, or those in which any other form of degeneration has taken place (kystomyoma, calcification) are to be operated upon; likewise those associated with carcinoma of the uterus. Fibroids pressing heavily upon bladder or rectum, had better be removed surgically.

This last point is still under discussion. Gauss and Friedrich estimate that from 70 to 80 per cent. of the irradiated fibroids shrink in size, and that in about one-third of these the tumor disappears entirely. Reifferscheid so confidently anticipates a quick diminution of the tumors after radiotherapy that he tries to tide the patients over the brief period of danger from incarceration by particular attention to bladder and rectum. For the present, however, an immediate operation seems preferable to radiotherapy.

The complication with tubal infections is to many, and the coincidence with ovarian tumors to all, authorities an indication for operation and a cause for rejecting radiother-

apy. The final and obviously very important contraindication is uncertainty of diagnosis. Radiotherapy should be employed only if it is certain that the case in question is really one of uncomplicated fibroid. If there be any doubt, operation is the only way of action. Reifferscheid mentions several instructive cases where ovarian cancers had been mistaken for subserous fibroids, were subjected to radiotherapy, and under the stimulating effect of the X-rays had made such rapid progress that operative intervention proved to be too late. It is wrong, therefore, says this author, for the practitioner to refer gynecologic cases directly to the radiologist for treatment. The gynecologist, instead, should first be consulted so as to decide whether or not a case is suitable for radiotherapy.

The foregoing paragraph deals with those kinds of fibroids in which operation is preferable to radiotherapy. There are other cases in which both methods of treatment may be taken under advisement. In this connection, the age of the patient is of importance. In women under forty, castration by X-ray or radium removes the possibility of conception and produces the subjective distress of premature menopause. By an operation, on the other hand, a solitary fibroid may be enucleated and fertility made possible; or if the uterus had to be removed, the ovaries may be preserved. It is true that the danger of a conservative operation is much greater than that of radiotherapy, but the desire for offspring will probably in many cases outweigh the risk incurred. The site, size, and number of fibroids will, in the final analysis, determine the decision, but in any case there is in women under forty room for nice discrimination.

Here, too, we shall have to decide what advice to give in cases of symptomless fibroids. While in women under forty, no treatment should be given, it seems logical to apply radiotherapy to such cases after the age of forty and before the tumors have caused serious symptoms.

Cases complicated by secondary anemia, cardiac or renal diseases are poor risks for operation. In this category, radiotherapy is by far the better mode of treatment. In the early days of X-ray treatment, an increased hemorrhage was often observed to follow the first treatment, which put the patients in jeopardy and has even caused death in a number of instances. The perfected technique of today securely prevents such complications. I cannot refrain from very briefly citing the personal observation of a woman of 46 who was referred to me by an eminent internist of Chicago for myomectomy. The tumor reached to within two fingers' width of the umbilicus and consisted in the main of two growths of

which one was interstitial, the other more subserous. The bleeding was abundant and persistent in spite of styptics, icebags, etc. The patient was excessively pale. The hemoglobin was 30 per cent.; erythrocytes, 1,500,000. Shortness of breath and renal casts still further complicated the clinical picture. Contrary to the expressed preference of my consultant for operation I employed the combined radium and X-ray treatment with the result that the hemorrhage ceased promptly, the large tumor shrunk to about one and a half times the size of a man's fist and the patient recovered her health completely—all within the short time of four months.

As we cast one more glance at this question of the treatment of fibroids, we see that there is nowhere an antagonism between surgery and radiotherapy. The two methods enter into competition only in a limited number of cases as was mentioned above. *In all others, either one or the other gives the better result and hence has to be employed to the exclusion of the other. And the conclusions reached and laid down in literature by authoritative observers leave little doubt as to the proper selection in each case.* Doederlein applied X-rays in 222 cases of fibroids and used the knife in 91 others in the same period of time. Kelly used radium in 210 cases and operated on 45. *The man who administers radiotherapy indiscriminately, disregards the best interest of his patients as much as the man who adheres exclusively to surgery.*

Climacteric hemorrhages and fibroids represent the principal domain of radiotherapy; but this does not exhaust its possibilities. There is a form of hemorrhages in juvenile patients which occurs at or soon after the adolescent period. These metrorrhagias may extend over astonishingly long periods of time and sometimes assume alarming proportions. For want of a better explanation we infer in these cases a hyperfunction of the ovaries. Treatment is usually powerless. Styptics reduce the flow at best only temporarily. Organotherapy at times seems to be of benefit; but the fact that equally good results have been reported from frankly antagonistic gland extracts such as the ovary and the hypophysis, makes one doubt a causal relationship between the medication and any favorable effect. Curettage is quite valueless, and the microscopic examination of the scrapings does not indicate any local cause. Change of climate or occupation occasionally checks the bleeding; and if the loss of blood is not too great and the patient and her family can be kept under control, we may content ourselves with supporting treatment and hope for a spontaneous cessation of the bleeding. If, however, the exhaustion and anemia of the patient become too pronounced, we may have

to resort to radiotherapy, which will promptly produce amenorrhea but, unfortunately, may also castrate the young patient. Two such cases have come under my observation in the past year. A girl of 15 who had been bleeding persistently for almost an entire year, was treated unsuccessfully by others and myself in every conceivable way. When her vitality had finally been lowered perceptibly, X-rays as a last expedient were employed which checked the flow instantaneously. Her amenorrhea has now lasted almost a year. In the second case, the patient, aged 20, was in a critical condition at the end of eight months of excessive bleeding which defied all efforts on the part of her family physician and myself. A single application of radium in the uterine cavity had an almost magical effect: the bleeding stopped abruptly and has not yet returned in the four weeks since the treatment. The fact that this splendid result was obtained with a small dose and short exposure, makes me hope that the ovaries will recover in time and the menses return in a normal fashion.

This so-called temporary castration or sterilization by X-rays or radium has been made use of in inflammatory diseases of the tubes and ovaries, the idea being that the resulting amenorrhea may favor a quiescence of the inflammatory process and render it amenable to absorbent measures. My personal experience with this class of cases has been rather limited and is not yet conclusive.

In tuberculosis of the adnexa and the peritoneum, however, the favorable influence of radiotherapy seems to be fully established.

A few weeks ago I demonstrated before this society the signal success obtained with radium in the treatment of condylomata acuminata. This affection can also be cured by means of X-rays. The latter frequently ameliorates pruritus vulvae unless it is caused by diabetes.

Remarkably good effects of the irradiation of ovaries in cases of exophthalmic goitre have been reported. Groedel, Mannaberg and others have observed complete disappearance of the thyroid tumor and the cardiac symptoms.

It may be added, parenthetically, that in osteomalacia, a disease too rare in this country to be of great practical importance, radiotherapy has yielded some very satisfactory results.

As the sum total of the preceding discussion we may say that in X-rays and radium we have most wonderful and invaluable means in the treatment of the class of cases with which we are here concerned.

Naturally, where there is so much light there is also much shadow. It must not be forgotten for a moment that radiotherapy is not an entirely harmless procedure. Everybody knows

about X-ray burns of the skin, but not everyone realizes that internal organs such as the intestines may also be burned. It is probably due to an intestinal irritation of a mild degree that most patients after X-ray treatment complain of nausea, vomiting, headaches, diarrheas, and fever. Disturbance of the bladder quite frequently follows in the wake of X-ray treatment and testifies to the effect of the rays on the vesical mucosa. A general lassitude also constitutes part of the X-ray reaction and together with an occasional psychic depression, may be explained by the effect of the X-rays upon the cells of the circulating blood. This general reaction, as a rule, is less pronounced after radium treatment but here we often find a protracted proctitis with its symptomatology as an undesirable by-effect.

An improved technique with exact measurements of dosage and adequate filtration will doubtless keep these unpleasant sequels of radiotherapy within certain bounds, but it cannot altogether eliminate them. At any rate, these sequels are of but short duration and they are much less serious than many of the complications which we observe after operations.

It is unfortunate that radiotherapy is rather expensive. But as patients treated with X-rays or radium do not have to remain in a hospital and regain their earning power more quickly and apparently more completely than after operation, the expense of radiotherapy is probably less than that of surgical treatment.

Summary.—The use of X-rays and radium has revolutionized the treatment of climacteric hemorrhages and of fibroids. The former, unless they are caused by cancer, can be cured almost without exception by either of the two agents or a combination of both. Of the fibroids, more than three-fourths of the cases are suited for radiotherapy; and in these a clinical cure consisting of cessation of bleeding and shrinkage of the tumors, can be produced in 98.4 per cent. In these cases, then, radiotherapy which has no mortality whatever, is infinitely superior to surgical treatment which is still burdened with an average mortality of about 5 per cent. There are, however, enough cases of fibroids left which should be treated only by operation. The indications for both procedures are today sharply defined. Either one or the other gives the better result and hence has to be employed to the exclusion of the other. The man who administers radiotherapy indiscriminately, disregards the best interests of his patients as much as the man who adheres exclusively to surgery.

Metropolitan Building.

RADIOTHERAPY IN MALIGNANT GYNECOLOGIC DISEASES*

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In the struggle for the control of cancer, the lead has in almost every phase been taken by gynecologists. Our specialty has a right to be proud of its accomplishments in this field. Gynecologists were the first to recommend and perfect a more radical surgical excision of the growth. They were the first to institute systematic education of the profession and the laity to promote early recognition of the disease. It was the German gynecologist Winter, who in 1902 undertook the first campaign of public education on this subject in Germany, and in our own country it was through the agency of the American Gynecological Society that a national organization, the American Society for the Control of Cancer was established. A third great accomplishment by gynecologists was in the development of radiotherapy for the treatment of cancer. Kelly and Burnam in America and Bumm, Doederlein and Schauta abroad blazed the trail in applying radium for the treatment of cancer other than small skin ulcers. The first therapeutic use of penetrating X-rays on an extensive scale was by Kroenig and Gauss in Freiburg, and its application for the treatment of malignant as well as benign tumors was first made by these same gynecologists for cases of uterine cancer. In these days when some would like to abolish gynecology as a specialty, it is well to remember that the greatest advances in the treatment of cancer in the last three decades have come about primarily through the work of gynecologists.

The term radiotherapy includes treatment both with radium and X-rays. In benign gynecologic conditions these two are of nearly equal importance, but in the treatment of malignant gynecologic conditions radium has many evident advantages, so that the X-ray is usually only supplementary to it and has seldom been used as an independent therapeutic agent. It should be remembered, however, that Wintz and Seitz have perfected a deep X-ray technique that has given surprising results in cervical cancer. What will be the outcome of efforts to perfect X-ray apparatus by such men as Douane no one can tell, but for the present radium is the more effective agent and will be primarily considered in this paper.

My personal experience with radium in the treatment of malignant gynecologic disease comprises 120 cases, of which 2 were ovarian cancers, 2 urethral cancers, 7 cancers of the vulva and 109 cancers of the cervix and va-

*Read before the St. Louis Medical Society, March 1, 1921.

gina. The first of these cases was treated in November, 1917, and the last, a few weeks ago. While this experience justifies certain views as to the immediate effects of this remedy, an experience of only three and one-fourth years in such a condition as cancer would not justify conclusions as to permanent results. The numerous reports published abroad and in this country in 1920 regarding five-year cures of cervical cancer with radium will be used as a basis for the conclusions regarding permanent results.

The technique of radium application at first sight seems so simple that anyone ought to be able to learn it. No one in general practice is tempted to undertake deep X-ray therapy with its high initial cost, its expensive upkeep, its complicated electrical contrivances, etc.; but radium! there is another matter; why not? If your patient can pay for its rental from some radium laboratory, why not use it? All you have to do is to wrap it in gauze and rubber and pack it against the cancer for twenty-four hours. That should be easy enough. Unfortunately it is not so easy, as all who have been working with radium realize after years of experience. One might as well say to the young graduate in medicine, go buy yourself a knife and cut away. Don't bother about getting hospital experience, get your patient and carve away, for surgery is simply cutting and tying and sewing up and you can do that as well as anybody else. The increasing accessibility of radium for general use by the profession carries with it serious dangers. In the treatment of benign conditions, there is, to be sure, justification for its more general use, but when it comes to the treatment of malignancy we have a most difficult problem. Each case requires a somewhat different technique. In fact, I am convinced that it requires more experience to give a radium treatment in cervical cancer properly than it does to perform the difficult radical abdominal operation for this disease.

Cancers other than cervical and vaginal cancers can be considered very briefly. Ovarian tumors on account of their size and inaccessibility are unfavorable for radium treatment. Only occasionally do we get temporary retrogression. Urethral cancers will sometimes react favorably but with them as with vulvar cancers the frequency of early lymph-gland metastases makes surgery preferable. In vulvar cancers we have the additional disadvantages that the skin of the external genitals is very sensitive to radium and severe painful burns are almost unavoidable. The surgical treatment of cancers of the body of the uterus with a percentage of 75-80 per cent. permanent cures is so successful as hardly to justify radium treatment in this form of cancer except

as an auxiliary measure or in patients in whom operation would be contraindicated.

Coming now to cervical and vaginal cancers, our problem is essentially this: to destroy the cancer with the least possible damage to normal tissues. Normal tissues vary greatly in their susceptibility to injury by radium. The cervix can stand about 10 times the dose of the vagina and about 15-20 times that of the rectum or bladder. Furthermore, with each treatment of radium the normal tissues become more sensitive and the cancerous growth more resistant. Our aim therefore should be to place the radium within the tumor or within the cervix and measure the dose so that if possible all the cancer is destroyed in the first treatment. By the first treatment I do not necessarily mean the first application. It may in fact be advisable to make several applications to different parts of the tumor, what I mean is the first treatment period, comprising about 5-6 weeks. At the end of that time a sclerosis sets in with obliterations of blood-vessels that makes the cancer less accessible and the normal tissues more susceptible to further radiation. Between 2,500-4,000 mghrs. of radium lightly filtered will usually accomplish this end. It has been the general experience that where permanent retrogressions have been obtained one such treatment period has usually sufficed. Only occasionally does a second or third treatment become indicated and very rarely is it followed by renewed retrogression. In fact, if after a year or so of complete retrogression the tumor again starts to grow, it is the exceptional case that will respond to further radium treatment.

Palliative results, to be sure, will be obtained

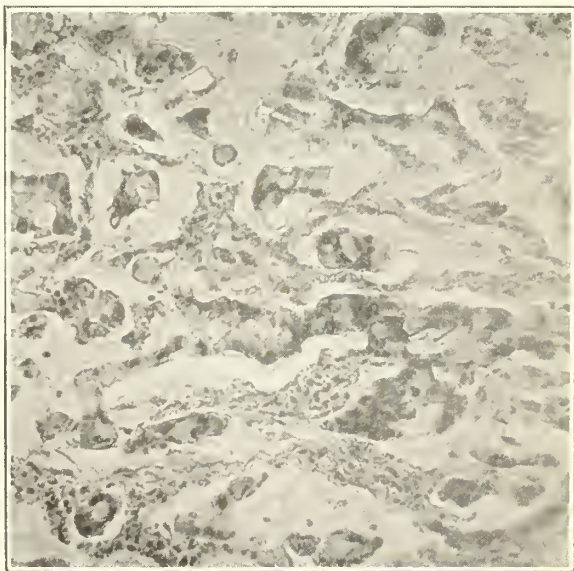


Fig. 1.—Carcinoma of cervix, seven days after radium treatment. Marked destruction of cancer cells.

in almost every case. Diminution of bleeding and discharge and temporary alleviation of pain will follow in the vast majority of instances; but here it is well to bear in mind that if the case is very far advanced or the patient very cachectic, an attempt to give a large curative dose will often do more harm than good. The patient may be overwhelmed with a necrosis toxemia causing her death in from one to four weeks or she will develop fistulas, peritonitis and pains more severe than ever before. Such a far advanced case had better be left alone or given a small palliative treatment only. It is in the group of inoperable but not cachectic cases that radium holds undisputed sway. While the percentage of permanent, that is to say, five-year cures in inoperable cancers is only about 10 per cent., the large number of two-year to three-year alleviations should be added to this and make the accomplishment of radium therapy in this group very considerable.

Some radium enthusiasts have felt that all cervical cancers should be treated with radium and none of them operated on. In some clinics abroad (Munich, Stockholm, Berlin, Madrid), radium treatment in all cervical cancers was begun as long ago as 1913, so that we have at hand now a sufficient number of five-year results to justify at least tentative judgment on this subject. In the December number of the new *American Journal of Obstetrics and Gynecology* I gave a review of recent literature on this subject and found that 223 out of a total of 1,114 cervical cancers treated with radium alone remained cured after five years, this is to say about 20 per cent. In other words, one out of every five cervical cancers can be cured with radium alone. In some of the reports the operable cases are considered separately from the inoperable ones and taking these cases alone we find that out of 415 operable cases, 131 remained cured after a period of five years, or 31.5 per cent. This is about the same as has been obtained by operative measures alone. If we further subdivide these operable cases into the early operable and advanced operable cases, we can begin to draw deductions as to the relative advantages of surgery and radium. The early operable cases are those in which the cancer is limited to the cervix; the advanced operable cases are those with slight parametral or vaginal involvement, the so-called borderline cases, that became operable with the technique of the radical abdominal hysterectomy of Wertheim. In the early operable cases it was found that radium cured between 35-40 per cent., whereas operation cured 45 per cent. or more. In the advanced operable or borderline cases, however, radium cured 23 per cent. while by operation only 10-12 per cent. were cured.

To summarize: 1. Until further improvements in radium treatment are perfected, operation is still indicated where the cancer is limited to the cervix. Pre-operative and post-operative radiotherapy in these cases will doubtless materially increase the percentage of permanent cures.

2. In border-line and inoperable cases radium alone or radium supplemented by X-ray is to be preferred to surgery. It will cure about one out of five of these cases and give marked temporary relief in about 90 per cent.

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CONSERVATIVE TENDENCIES IN MODERN GYNECOLOGIC THERAPY*

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Not until I began to write these lines did I realize that the title of this paper does not indicate the topic to which it is devoted with that preciseness which is expected from a well chosen title.

The word "conservative" for the moment does not enjoy great popularity. In its customary social or political meaning it denotes a stubborn insistence upon maintenance of established conditions, and opposition to any decided change. This is not the tendency of modern gynecologic therapy. In its medical application it usually is employed to emphasize non-operative as opposed to operative therapy. The definition of the word "conservative" as found in the dictionary is: "Having the tendency or power to preserve." I wish to emphasize at the outset that it is exactly in this meaning that the word is used in describing tendencies noticeable in recent gynecologic literature. If I have read this literature of the past decade aright it reflects the earnest efforts of all serious workers in the field to modify gynecologic therapy so that, if at all possible, the genital organs are preserved and their function continued. Of necessity such conservative efforts will also result in a limitation of operations as a means of relieving gynecologic "symptoms." Permit me to emphasize that I am speaking of "symptoms" and not of "diseases." I shall presently have an opportunity to explain the necessity of such a differentiation in the light of newer knowledge.

All organs of the body serve some purpose. Some of them, as generally conceded, are requisite for the sustenance of life itself. Not even the most radical of surgeons attempt to extirpate them. Less secure against surgical attacks are other organs of meaner dignity. Efforts towards their preservation in general

*Read before the St. Louis Medical Society, March 1, 1921.

should be proportionate to their importance as factors in the health and happiness of the individual. From this point of view there can be no doubt that the genital organs, both of man and of woman, and especially of the latter, are entitled to a higher valuation than is accorded them at the present by the average surgeon. Personally I have never been able to understand the logic of thought of a surgeon who one day without pang removes an uterus containing a small fibroid and the next day refuses to amputate a wretchedly maimed lower extremity, because he knows that persistent conservative endeavor might be crowned in the end by attaining a crippled but still useful leg.

The gynecologist, the man who possesses specialized information concerning the varied and complex functions of the female genitalia under normal and abnormal conditions, and appreciates their important relation to the health and happiness of the individual, in general, sets a higher value on the necessity and desirability of their preservation. When speaking in this connection of normal function under "normal" conditions I mean their function during menstruation, during pregnancy and labor, their normal involution at the climacteric age, and most of all I am thinking of their harmonious interaction with other endocrine glands during the childbearing period of life in the maintenance of a condition of health. Gynecologists, therefore, especially those combining in their work obstetrics with gynecology, better than any other specialists, and particularly general surgeons appreciate how normal temporary changes in genital function during menstruation, pregnancy, in the puerperium and climacterium influence the function of other organs in the body, and how, on the other hand, abnormal states and diseases in other organs secondarily affect and interfere with normal genital function, thus giving rise to "gynecologic" symptoms really without a gynecologic disease.

As one of the greatest achievements of conservative tendencies in gynecology I regard the irrefutable fact, now firmly established, that such time honored gynecologic *symptoms* as pain, hemorrhage, irregularity of menstruation, leucorrhea, etc., do not prove the existence of a gynecologic *disease*, and again, that there are many gynecologic diseases or anomalies which do not give rise to symptoms, *e. g.*, a considerable percentage of retroversions of the uterus. It seems rather obvious that such symptomless cases do not require therapeutic interference of any sort, neither operative nor non-operative.

Suitable and effective therapy of necessity is dependent upon the exact recognition of the cause responsible for the symptoms. Gyneco-

logic diagnosis has become more difficult, because many of the symptoms heretofore considered pathognomonic for certain diseases have been deprived of this dignity.

Backache in the presence of a retrodeviated uterus used to be a clear indication for a corrective operation. Familiarity with the recent extensive literature on backache today forces the gynecologist, even in the presence of a retroversion, to exclude as possible causes for the pain, sacro-iliac derangement, arthritis of lumbar spine, faulty attitude, flat feet, spinal curvature, lumbar myositis, and as was necessary in a case I saw but a few days ago, spinal cord disease. And even after all these causes have been eliminated it will be safer for the gynecologist to exclude the ever present and ever perplexing nervous element by making first a trial with a pessary whenever the uterus can be thrown into anteversion. Those who proceed in this manner before advising operation or even only local treatment to patients in whom backache is the predominant symptom, will readily agree with me that the majority of patients, especially in the present area of high French heeled shoes, can be relieved of their backache without operation and without any local treatment.

Take the symptom of *hemorrhage*. Some of the text books, continue to cite menorrhagia or metrorrhagia as the classic symptom of endometritis, of infectious processes in the uterus or its adnexa, of fibromyoma or of retroflexion. A radical change of these time-honored conceptions has been forced on the gynecologist. This was achieved in the main by two discoveries: First, the histologic picture of the so-called glandular endometritis, as a matter of fact, only shows the endometrium in its premenstrual cycle; secondly, only in cases of abortion, of uterine polyp and of carcinoma or other destructive process, are found in the endometrium histologic lesions (such as evidences of ruptured or destroyed blood-vessels) which satisfactorily explain the pathologic hemorrhage. These two discoveries together with the coincident recognition of the relation of normal endocrine ovarian function to the physiologic menstrual hemorrhage, logically have led to the plausible deduction that if abnormal uterine hemorrhages, in the absence of abortion, polyp and carcinoma, are not due to visible tissue lesions, they must be due to abnormal endocrine ovarian function. Certain results obtained with organotherapy seem to confirm this assumption. A belief in this etiology of abnormal uterine hemorrhages automatically limits the use of the curette strictly to the removal of abortion rests or uterine polyps, and the removal of the endometrium for diagnostic study in suspected

malignancy. On the one hand, the ever increasing employment of ovarian and other organ extracts in the treatment of gynecologic patients clearly demonstrates a growing belief in ovarian endocrin function; on the other hand, there can not be noticed any marked decrease in the vogue of curettage. Am I correct in deducing from these two facts, that a large number of the curettages performed every day are unnecessary, and really out of harmony with the very views held by those who perform them?

Better in accord with this newer knowledge concerning ovarian function are the present efforts of gynecologists to combat the symptoms and functional anomalies, presumably due to ovarian hyperfunction, by relieving or eliminating the factors which might incite this hyperactivity of the ovaries. Rest, the application of heat in all its various forms including diathermy, temporary correction of uterine malpositions with pessaries, the avoidance of traumatism (*e. g.*, that of constipation, or cohabitation, etc.), from this newer point of view deserve and have actually achieved greater recognition in the therapy especially of uterine hemorrhage. The *modus operandi* of their direct influence on ovarian function is better understood, and for this reason these non-operative therapeutic measures now can more successfully compete with operations which heretofore had the advantage of exhibiting more clearly just how they are supposed to work and to help.

In the control of ovarian hyperactivity, however, more useful than any of the older and newer therapeutic methods proves the direct effect of radiation in proper dosage. This feature of present-day gynecologic therapy was so thoroughly covered in Dr. Gellhorn's paper, that I can well limit myself here to the statement that radiotherapy in the majority of instances obviates the necessity of removing the uterus or the ovaries in that group of cases in which hemorrhage used to be, and unfortunately still is, considered the justifiable excuse for a hysterectomy. With proper radiation it is possible not only to inhibit further growth of myomata but to effect their shrinking and disappearance; not only to destroy ovarian activity if it is desired, but to reduce hyperactivity to approximately normal activity; to suppress ovarian function only temporarily and thus to preserve menstruation and, indeed, even the reproductive faculty. With increasing frequency appear in literature the reports of normal pregnancies subsequent to the ray treatment of conditions, which in the belief of some surgeons still demand removal of the uterus or the ovaries.

Radiotherapy after all is still in its infancy, and only a few days ago I saw a reference to

the very latest attempts to stimulate ovarian activity by means of X-rays—successful rejuvenation of women near the climacterium! If it should become possible to stimulate ovaries in this manner, our rather scant therapeutic armamentarium for those conditions, now ascribed to ovarian hypofunction, undeniably would be greatly enriched. This may yet lead to the final discard of the intrauterine stem and obviate useless attempts to make an undeveloped infantile or puerile uterus grow by dilating its cavity and scraping out the endometrium.

How radiotherapy already is reducing to a very considerable extent the number of radical operations for uterine carcinoma with their high primary mortality, has been clearly set forth in the paper of Dr. Taussig. I thoroughly agree with his conclusions that at this time the percentage of permanent cures with radium already equals that of the radical operation, and that further improvement in the radium technique promises still better results.

A temporary suppression of ovarian activity by means of X-rays in the treatment of inflammatory processes of the adnexa has recently been advocated from two independent sources. This suggestion is mentioned in this connection solely to emphasize the zealous efforts of all gynecologists to resort to the removal of the adnexa in inflammatory conditions only when all non-operative methods of treatment have failed. Much time is consumed in this conservative therapy, and it is a sad commentary on existing social conditions that only in the well-to-do classes the overwhelming majority of women infected with gonorrhea are spared mutilating operations by long continued treatment, consisting chiefly in rest and avoidance of such physical strain as hard work.

Though information at present available concerning the rôle played by functional disturbances of the ovary, and probably of other endocrin glands, in the etiology of gynecologic anomalies is still decidedly limited in its scope, definite changes in the conception of the rationale of some of the usual operative and non-operative methods of treatment are necessary. Reference already has been made to two facts: First, curettage and the use of caustics on the endometrium, especially in the treatment of uterine hemorrhage, are hardly justifiable procedures. We realize now why these procedures so rarely have yielded a satisfactory result. Secondly, the empirically established effectiveness of certain therapeutic measures must be explained in a different manner. The relief of that most common of gynecologic symptoms, hemorrhage, is obtained only in so far as the operative or non-operative procedure reduces or eliminates abnormal stimulation of the ovaries, by reducing pressure (as in cor-

rection of malpositions), by stretching or breaking adhesions, and by reducing inflammatory irritation.

A third deduction might be reasonably drawn from this better understanding of the etiologic significance of disturbed ovarian function: It should be possible to counteract the effects of a deficiency of ovarian hormones by the administration of ovarian extract, or, in view of the assumed interaction of the entire endocrin system, it should be possible to stimulate or retard, respectively, ovarian function, as required in the individual case, by the administration of hormones extracted from other endocrin glands, which are supposed to work as synergists or as antagonists of the ovaries.

I shall refrain from discussing here adequately the complex problem of gynecologic organotherapy. Personally I acknowledge a certain value of some of the ovarian extracts in the satisfactory relief of certain symptoms and functional anomalies. But I am convinced that our definite information in regard to interglandular reciprocity and harmony, synergistic and antagonistic activity, etc., as established by scientifically correct investigations, is far too limited to place gynecologic organotherapy on any definite basis. Those employing these extracts singly or in fantastic combinations should realize clearer, than they seem to, that they are merely experimenting with substances which in some conditions at times seem effective. The fact should not be forgotten that all scientific experimental proof is still wanting that any one of the numberless commercial preparations on the market actually contains, and thus is capable of actually replacing, all the hormones normally supplied by the gland whose dysfunction in the individual case is held responsible for the existing pathology.

Fortunately even the most enthusiastic organotherapists concede that endocrin dysfunction is not always the cause but occasionally only the result of impaired health or of a state of temporary debility. The gynecologist is well aware of this fact. He knows that the ovaries prove almost specifically sensitive in this respect. Secondary amenorrhea, the very obvious evidence of suppressed ovarian activity, is commonly observed in certain types of brain tumor, in tuberculosis often before the disease itself has become manifest, in diabetes, in cachectic patients, or in those recovering from typhoid or other debilitating diseases. From this point of view the importance and value of general hygienic-dietetic measures in the treatment of gynecologic functional anomalies can be better appreciated. It is noteworthy that in a recent work its author, probably the most extravagant enthusiast in gynecologic organotherapy, emphasizes the necessity of hygienic measures during the adminis-

tration of the various combinations of organ extracts specifically required by the various gynecologic anomalies.

Finally I shall but briefly mention the significant effect exerted on gynecologic therapy by the results of modern psychologic investigations. The importance of the nervous element in gynecologic symptomatology was always recognized, and when not exactly fitting into his mental picture of the existing pathology the gynecologist was ever ready to ascribe certain symptoms to the patient's nervousness, neurasthenia, hysteria or hypochondria. Entirely satisfied with the anatomic result of an operation he was prone to refer, without a special feeling of regret or responsibility, the still complaining patient to the neurologist for further treatment. In future the number of these patients, operated uselessly or clearly not to their advantage, will be smaller. Investigations made by the newer schools of psychology and philosophy have yielded more definite information concerning the effects of the unconscious thought, and of the unfulfilled wish (not necessarily in the Freudian limitation to the sex sphere). These investigations explain why certain childhood fixations will manifest themselves later in life, and interpret the varied unconscious expressions of the sense of inferiority. Take as example the last mentioned inferiority complex. Through it it becomes plausible that the sterile and disappointed woman subconsciously or unconsciously will acquire and exhibit all those symptoms and pains which seem to explain the sterility. She will describe symptoms that have been noticed by some friend before she finally had become pregnant, subsequent and, therefore, presumably as the result of a certain operation, treatment or medication. I am sure that every gynecologist is as insistently urged as myself by some of these patients to stretch the womb, to treat her sore on the neck of the womb, or of late, to give her injections of corpus luteum. Or another example, I can only touch this great problem by simply citing a few illustrative examples: The psychiatrist has known for a long time that the symptomatology of a so-called traumatic neurosis is not apt to disappear until the pending damage suit is settled. Unconsciously, not deliberately, automatically prompted by that all pervading instinct of self protection, the patient is maintaining the symptoms so important for him. The gynecologist is just beginning to appreciate this psychologically so obvious phenomenon in his own work. If he will go to the trouble of questioning his patients he will discover that more frequently than he anticipated, the seeming failure to cure a patient of her complaints, in spite of the objectively perfect result of the clearly indicated therapy, in fact

is due to the necessity, unconsciously perceived by the patient, of maintaining certain symptoms or complaints. Their presence might imply more affection and sympathy on the part of a not very attentive husband or family; or might mean relief from uninteresting or tiring work she is forced to do when well; it might mean the avoidance of conditions or situations not as obvious as those already mentioned. The conscious feeling of inferiority very often stimulates the development of one single faculty in the endeavor to excel in it. Unconscious inferiority in a similar manner results in the appearance of certain symptoms which by common usage are called hysteric. We realize that a patient is exaggerating her symptoms, and always have been careful to avoid being misled, though we did not know the underlying psychic mechanism. Now we shall have to take into consideration this combined mechanism of the childhood fixation, of the unfulfilled wish and of the sense of inferiority, *e. g.*, in that large group of patients combining the symptoms of so-called mechanical dysmenorrhea with sterility. We now can understand the empirically established, but not yet generally appreciated, uselessness of the customary therapy of this condition, cervical dilatation or cervical plastics. Investigations from time to time made on a large scale in some of the larger Eastern universities for girls concerning the frequency of dysmenorrhea, tend to show a marked decrease in dysmenorrhea. Largely this improvement might be ascribed to the more general interest in athletics and physical exercises, but in part it might also be due to the fact that in recent years a vastly greater number of these girls had reached their puberty properly prepared for it. Fewer of them had grown into womanhood with the idea, fixed in them during childhood by their own mothers, that menstruation is a very painful process requiring rest, hot water bottles and medicines. The one great practical achievement of all psychoanalytic work is the evident fact that many of the symptoms disappear, that patients feel better or feel well, when they become conscious of the actual relation of definite past experiences or influences to their present symptoms. To explain the origin of certain symptoms to the patient, is a new and valuable addition to conservative therapy in modern gynecology.

This, of course, requires a study of the patient as an individual, a correlation of certain local findings to the sum total of symptoms and complaints. The specialist often is warned against and also ridiculed for his all too common habit of seeing only the organs he is interested in and forgetting the rest of the patient. An exhortation to avoid this mistake must be directed particularly to the gynecol-

ogist. No other organ group exerts during its normal and abnormal functions such a potent influence on the individual, and is so easily disturbed by extraneous factors, as the internal genitalia of woman.

I may then summarize that the conservative trend in modern gynecologic therapy is the result of a better understanding of the mechanism of normal genital function; of the acknowledged desirability of maintaining this function; of an appreciation of its easy and frequent disturbance by extragenital conditions; and of due regard for the fact that the common gynecologic symptoms only to a limited extent are pathognomonic for definite gynecologic lesions. The uncertainty of diagnosis, thus created in a considerable percentage of seemingly gynecologic sufferers, demands strictest limitation of all operations, which remove organs and thus cause the cessation of genital function; this uncertainty demands preference of all non-operative over operative methods of treatment. Useless, if not actually injurious, is any gynecologic local therapy in the not inconsiderable number of those patients in whom gynecologic symptoms or functional anomalies are caused by extragenital factors, physical or mental.

Metropolitan Building.

EXPERIENCES WITH THE LYON-MELTZER METHOD FOR THE DIAGNOSIS OF GALL-BLADDER DISEASE*

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AND

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ST. LOUIS

In the past two years several papers have appeared dealing with the results of investigations of the bile passages by means of a tube passed into the duodenum. Rost¹ a number of years ago made the observation on animals that a solution of peptone given by mouth or injected directly into the duodenum caused contraction of the gall-bladder with expulsion of its contents.

Meltzer some years later observed a similar action of the gall-bladder when a solution of magnesium sulphate was introduced into the duodenum. These observations have been the basis of clinical studies by Lyon, Brown and others.² The technic of the procedure has been amply described and we shall not repeat it here. We have examined 20 cases who had or were suspected of having some trouble

*Read before the Greene County Medical Society (Springfield) May 27, 1921.

about the bile passages. Some of these cases were examined several times. While this material is too scanty to allow of any far-reaching conclusions, we have nevertheless gained some definite impressions as to certain limitations of the method as at present carried out.

In the first place the tube does not always enter the duodenum as promptly as might be wished. Instead of a ten to forty-five minute interval as has been described we have more often waited three hours or longer before the tube was in place. We could discover no reason for the usually tardy passage through the pylorus by the tube. In the same individual we might wait several hours for the tube to pass only to have it pass very promptly at a subsequent examination under apparently the same conditions. We agree with Palefski³ that the various "signs" for recognizing the presence of the tube in the duodenum, such as the tug which may be felt on attempting to withdraw the tube, and the reaction and appearance of aspirated fluid, are unreliable, and that the fluoroscope is the only certain means of determining the tube's position.

The recognition of the source of the bile, whether from the gall-bladder, common duct, or liver, is not always easy. The "gall-bladder bile" is described as being dark yellow to dark green in color, more viscid and of distinctly higher specific gravity—between 1,015 and 1,030—whereas the "liver bile" is light yellow, very slightly viscid, with a specific gravity of about 1,008. In the majority of instances these distinctions hold good and there is no question as to the difference in character of the first portion of biliary drainage characteristic of gall-bladder contents and the subsequent portions resembling fresh liver bile. It has occurred to us however that since the specific gravity of the magnesium sulphate solution is around 1,070 a very small portion of this remaining in the duodenum and mixing with the "liver bile" may raise the specific gravity to that of gall-bladder bile and cause confusion. This possibility does not seem remote since we were seldom able to obtain by aspiration immediately after injecting the magnesium sulphate the full amount that had been introduced. Then again liver bile is not always of the light yellow color that distinguishes it from gall-bladder bile. In one case of subsiding catarrhal jaundice the drainage of liver bile was of enormous quantity, the flow very rapid—400 cm. in two and a half hours, yet the bile was always of a distinct dark green tinge. The low specific gravity and the great quantity precluded the possibility of its having been gall-bladder bile. In a case of empyema of the gall-bladder we might have been led astray except for the absolute certainty of the clinical

picture. In this patient, after passage of the duodenal tube there was aspirated 20 cm. of a dark, reddish brown, clear bile of slight viscosity. What was its source? It contained no blood chemically or microscopically. The subsequent tube drainage was a dark yellow, somewhat turbid, very viscid fluid. The first drainage might possibly be called common duct bile though it was far too dark for the usual common duct bile. The subsequent drainage in gross appearance and viscosity was like gall-bladder bile. The gall-bladder, as proved at operation the next day, was completely occluded by a cystic duct stone and contained muco-pus—no bile. In another case, although we obtained no "typical" gall-bladder bile, the specific gravity of the first drainage was 1,020, a point considerably higher than is usual for liver bile, and the color was opaque amber. At operation two days later the common duct was blocked by a stone and the gall-bladder contained sero-pus—no bile.

The following protocols of some of our other cases will give an idea of the general results of our examinations.

Mrs. G. Hospital No. 21,417. Age 41. Clinical diagnosis gall-stones. Not operated upon. The first drainage was 38 cm. of a dark, greenish-brown, opaque fluid, sp. gr. 1,036, alkaline in reaction. Subsequent drainage was a light amber fluid, sp. gr. 1,022 which gradually fell in succeeding portions to 1,011. Bile was allowed to drain for seven hours, a total of 234 cm. being obtained.

Mrs. G. Hospital No. 21,421. Age 45 (?). Clinical diagnosis gall-stones. Not operated upon. First drainage 56 cm. of an amber colored opaque fluid with a sp. gr. of 1,021. Subsequent drainage was a fluid of much the same appearance with a sp. gr. of 1,010. A total of 150 cm. of bile was obtained in the three hours in which the tube was in place.

Mr. I. Hospital No. 21,448. Age 18. Diagnosis chronic infectious arthritis and history of catarrhal jaundice two years ago. First drainage 29 cm. yellow-brown, clear fluid with a fine precipitate. Sp. gr. 1,022. Subsequent drainage amber, clear, viscid fluid, sp. gr. 1,008. A second tubing of same patient gave the following result: First drainage 41 cm. of a dark, greenish-brown, opaque fluid, sp. gr. 1,022. Subsequent drainage yellow, opaque fluid, sp. gr. 1,011. Total of 110 cm. of bile was obtained in one hour and 45 minutes.

Mr. B. Hospital No. 21,424. Age 50. Diagnosis cancer of stomach with metastasis in liver; confirmed by operation. First drainage 63 cm. of a dark, greenish-brown, opaque fluid with coarse, stringy mucus, sp. gr. 1,016. Subsequent drainage a muddy, yellow, green fluid with sp. gr. of 1,010.

Mrs. S. Hospital No. 21,762. Age 60. Gall-bladder had been removed eight months before. First drainage 30 cm. of a greenish-yellow fluid with flocculent precipitate. Subsequent drainage 100 cm. of a light greenish-brown, very clear fluid. Unfortunately the sp. gr. of these two portions was not obtained.

This experience does not encourage us to attach great diagnostic weight to evidence obtained by means of the Meltzer-Lyon method, mainly for the reason that we are too often in

doubt as to the source of the bile obtained. Perhaps with further refinement of method this difficulty can be obviated. For the present we prefer to rely upon other clinical evidence.

Metropolitan Bldg.

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POMPHOLYX*

Report of a Case of This Rare Skin Condition

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Pompholyx, commonly known by the name of dysidrose by the French authors, is a skin disease of rare occurrence, especially when found on the soles of the feet in the male subject. It is an acute or subacute affection of macular, vesicular or vesico-pustular variety, characterized by the following subjective symptoms: itching, smarting, burning, stinging and prickling. It is usually found on the palms and plantar aspects of the feet and in the majority of cases is symmetrical.

In this study it is my intention to give primary emphasis upon a subject which, according to the famous authors on skin diseases such as Stelwagon, Fox, Shamburg, Unna, Williams and Kaposi is of unusual occurrence. These men especially noted that the condition usually occurred on the palms and was symmetrical. They also state that pompholyx is regularly found on the plantar aspects of the feet.

The etiology of this disease is masked in a veil of mystery; like so many other skin conditions, it is very obscure. We know that it most commonly occurs during the second and third decade of life and that it occurs most often in individuals with lowered vitality or lowered resistance, and it is especially noted in neurasthenics. These patients maintain that they are attacked regularly and systematically at a time when their mental or physical condition is at low ebb. Pompholyx may run either a short or prolonged course. The average duration is from three to four weeks and it usually persists until the mental condition is corrected if it be due to a mental condition or until the physical resistance is raised if it be due to lowered vitality. It has also been discovered by reviewing this disease

by Kaposi that those who are constitutionally strong escape it. Unna states that he has continually found in the secretions of the vesicles, a bacillus resembling the tubercle bacillus but morphologically thicker and shorter. This finding he considers a pathognomonic factor in the production of pompholyx.

Also it has been noted by different authors that other organisms have been found in the secretions of the pompholyx vesicle, such as staphylococci and streptococci. Therefore, it is hard to tell whether or not the primary condition is caused by the bacillus of Unna or by the inoculation of the vesicles with a re-infecting organism, this producing a secondary condition.

In considering the diagnosis of pompholyx symptomatically, we must consider first the subjective findings which are to be discovered by quizzing the patient, such as whether or not he illicit pain, temperature, pricking, itching, burning, tingling, anesthesia, hyperesthesia or crawling sensations. If you can determine the type of sensation, you immediately have a clue as to the possible treatment of the disease. Many times patients complain of intermingled sensations, such as pain combined with burning, or tingling combined with a hyperesthesia, although in many cases no history of pain is elicited. It is plainly noted that if the disease exists in a neurotic patient it will be hard definitely to draw any conclusion from subjective findings. Therefore, we must base our deductions mainly upon objective signs.

The objective symptoms are usually divided into types, that is, whether or not they are of a macular, vesicular, papular, pustular, nodular, wheels, blebs or of a tumor variety or whether they assume the characteristics of an ulcer, fissure, scar, crust, excoriation or a scale. By determining the above, we have climbed the first step of the ladder of diagnosis.

After we have determined the type of lesion, we must next find out if possible the condition which is causing the disease, because many times conclusions can be drawn if we have a clue as to the diagnosis. Following the findings which we have enumerated above, we next must determine the distribution of the lesion; for example, some diseases can be diagnosed immediately by the location of the condition, such as herpes zoster. Pompholyx is a disease which is universally found on the soles of the feet. Syphilis is a disease which many times will manifest itself by a vesicular eruption on the soles of the feet or palms of the hands, but this condition is easily differentiated because of the history of an initial lesion as well as other evidence pointing to the secondaries of syphilis. Eczema of a vesicular type is confounded with this type of lesion,

*Read before the Charlestown U. S. N. Hospital Medical Society, May 5, 1919.

but usually eczema will occur upon other skin surfaces of the body; also the characteristic organic symptoms of eczema are not found. Eczema manifests itself many times upon the dorsal surfaces of the hands and fingers, which is contrary to the manifestations of pompholyx.

The configuration of a lesion aids materially in the diagnosis of this disease. Many times the configuration of a lesion alone will produce a conclusive diagnosis such as in psoriasis.

The outcome of this disease is determined by the study of the case which will be presented following this description. It usually runs a limited course and in most cases its improvement will be in proportion to its duration and also in proportion to the improvement in the patient's vitality; this spontaneously produces a cure in from two to four weeks. The patient is subjected to recurrent attacks every spring.

The treatment of pompholyx is not especially difficult since we know that no matter what procedure is adopted, the disease will produce a spontaneous cure similarly to impetigo-contagiosa. The treatment is divided into two parts as are most procedures in the treatment of skin disease. First, we consider the constitutional side, and secondly the local side of the treatment of pompholyx. The constitutional or symptomatic treatment consists in prescribing cathartics if the patient complains of constipation; diuretics for the purpose of aiding elimination from the kidneys; animal extracts for those individuals who have hypo-internal secretory disturbances, analgesics for intense pain and sedatives for a hyper-nervous state.

Many times the most important step in the treatment of pompholyx is a well regulated, carefully worked out systematic program of exercise. Exercise aids the circulation, increases respiration and stimulates digestion and secretion. By readjusting a patient's program of exercise, you successfully draw to a successful close the treatment of a skin disease. Nor need only this feature of exercise be emphasized but also the patient's diet should be regulated and definitely controlled. The diet in order to aid the treatment of this condition should be prescribed for the patient's individual needs as carefully as the pediatrician writes out his formula for a digestive disturbance in a baby with marasmus. Definite quantity of food should be given and energy producing power should be calculated to meet the individual tastes of the patient. While it is not possible to say that definite foods will produce definite skin lesions, still there are many diseases caused by indigestible foods or by the partaking of foods by patients who have

idiosyncrasies. The diet should be plain but nutritious in all cases of pompholyx. The meals should be taken regularly and not too much should be eaten. Such foods as pork in any form, salted meats, lobsters, crabs, gravies, condiments, excessive amounts of fruit, excessive tea and coffee drinking, and sparkling wines and beers should be avoided. An ample dietary is found in beef, mutton, lamb, poultry and potatoes if they are used in moderation. Water can be taken in large quantities.

Fresh air and sunshine will aid in the treatment of this disease, and by following the laws of health and hygiene, the success of the treatment is enhanced materially. External treatment was applied, such as lotions, ointments, and pastes.

In conclusion, I will state that pompholyx, like all other rare skin diseases, may be defined, symptomatized, diagnosed, prognosticated and treated by following the laws laid down by the Fathers of Medicine. By following the conclusion deduced by Kaposi, Unna and Williams, we will enhance our knowledge along the lines of the treatment of different diseases. Let us all determine to study carefully each individual case; let us all carefully prepare our histories and study our clinical findings of every patient who comes to us for treatment, and by so doing, we will ultimately unravel the veil of mystery which hangs about so many obscure lesions.

CASE 1.—T. B., male, aged 25, height 5 feet 8 inches, weight 150 pounds.

The patient entered the hospital complaining of a rundown nervous state, was irritable and dissatisfied with life. He was below par physically according to his statement. He complained of an eruption on the plantar aspect of the left foot, located at the metatarsal phalangeal junction. He had a clerical position in the hospital and was referred to the skin ward for diagnosis and treatment. He gave a negative history as to injuries, operations and previous organic diseases except nervousness and the eruption on the sole of the left foot as described above. Teeth, tonsils, eyes, ears, nose, throat, glands, heart, lungs, abdomen, kidney, rectum, prostate, genitalia, spine, extremities and reflexes all negative (with the exception of exaggerated reflexes). The laboratory findings on examination of the urine, blood, stomach contents, sputum, stool, and Wassermann were all negative. The chest upon examination was normal in size, shape, as to deformities, as to movements, as to rhythm and abnormal sounds. The heart was located in the correct position and upon auscultation no abnormal sounds were elicited, and the blood pressure was normal and no sign of arteriosclerosis was found. The abdomen was negative. The joints were negative. The nervous system showed hypertone. The genito-urinary system was negative. In summarizing the above, it can plainly be seen that the only positive findings were those referable to the nervous system and the skin.

Upon the examination which was recorded on a special sheet, the following data was registered; temperature normal, sensations of prickling, itching, burning and stinging were present. The macular,

vesicular and pustular features characterized the eruption. No signs of secondary lesions were noted. The cause of the disease in this case points towards a nervous origin.

The distribution of the lesions was characteristic of pompholyx though rarely is it found on the soles of the feet. The duration of the attack was about two weeks and it occurred annually. There was a slight area of redness surrounding each vesical. No sooner would one vesical heal than another would crop out. The treatment was symptomatic and local. The local treatment consisted of ordinary bath, castile soap, boric acid powder. Lotion used: carbolic acid m. 30, boric acid dr. 1, glycerine dr. 2, zinc oxid powder dr. 1, water 2, ounces 6. Ointments consisted of lead water and laudanum, calamin lotion, menthol, salicylic acid, lead plaster, soap plaster and vaseline. Iodin used as a parasiticide.

The disease spontaneously ended its course, and it is a question whether the local and general treatment were an aid.

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RESULTS OF OPERATION FOR VARICOCELE.—During the period immediately preceding and after the entrance of the United States into the World War and while recruiting was in active progress, a large number of operations for varicocele were performed on young men in order to permit their entrance into the Army or Navy. As a result of one of these operations in which the ligation of the veins was followed by the development of a hydrocele, a suit for alleged malpractice was brought. A search of the American literature at this time, in order that the highest medical authorities on the subject might be quoted, revealed the fact that modern textbooks on urology and on general surgery fail with one exception to recognize the frequency of this complication. John Douglas, New York (*Journal A. M. A.*, March 12, 1921), after a study of the end-results of 303 operations for varicocele at St. Luke's Hospital, reached these conclusions: The operative treatment of varicocele is frequently followed by hydrocele. Of a total of 303 operations, seventy-six patients were examined, thirty of whom, or 39 per cent., had a hydrocele; forty reported by letter or telephone, and of these seven, 17 per cent. stated that hydrocele had developed. Of the total of 106 patients examined or reporting by letter, thirty-seven, or 35 per cent., had hydrocele. Four, or about 4 per cent., had atrophy of the testicle, and there were two recurrences of the varicocele. The operation should not be performed except in those cases of very large varicocele giving marked symptoms in a non-neurasthenic patient—certainly not in the type of cases previously referred by the various medical examining boards for admission to the Army or Navy. If the operation is undertaken, the frequency of hydrocele as a complication should be explained to the patient as a protection to the operating surgeon. In the performance of the operation every care should be taken to avoid trauma to the veins of the cord, and to prevent hematoma or even slight infection, and thus to limit thrombosis and also to avoid the ligation of the spermatic artery as well as the artery of the vas.

RELATIVE EFFECTIVENESS OF VARIOUS FORMS OF TREATMENT IN NEUROSYPHILIS.—About fifty patients with neurosyphilis were treated by spinal drainage by John H. Stokes and Earl D. Osborne, Rochester, Minn. (*Journal A. M. A.*, March 12, 1921), with a view of ascertaining, if possible, the advantages of this type of medication. Their method consisted of

the weekly withdrawal of from 30 to 70 c.c. of spinal fluid from fifteen minutes to one hour following an intravenous injection of arsphenamin. Mercury, in the form of inunctions or the intramuscular injection of a soluble salt, was also employed in every case. The average number of spinal drainages in each case was five, the highest number being nine and the lowest three. On the completion of drainage, the patients were placed on interim inunction treatment and re-examined after intervals of from two to nine months. The somewhat disappointing results led to their being placed on Swift-Ellis-Ogilvie intraspinal treatment. A comparison of the findings on patients receiving spinal drainage in conjunction with arsphenamin intravenously and routine mercurialization, and the findings on patients receiving an equal amount of routine treatment without spinal drainage, demonstrates no superiority in favor of the drainage method. The most immediate change produced by either of these methods of treatment is in the cell count. A transient but marked rise followed by a fall toward normal limits occurred in patients receiving spinal drainage, and we have reason to believe that a similar Herxheimer-like curve of pleocytosis accompanied by transient exacerbation of symptoms occurs in many patients under treatment for neurosyphilis by routine methods. Temporary rise in the cell count early in the course of treatment should not therefore necessarily be regarded as of unfavorable prognostic significance. In ten patients in whom spinal drainage had produced indifferent results, the administration of arsphenaminized serum intraspinally some months later produced what appeared to be more satisfactory and more permanent results.

FUNCTIONS AND SCOPE OF AN INDUSTRIAL CLINIC IN A GENERAL HOSPITAL.—The great function of an industrial clinic Harry Linenthal, Boston (*Journal A. M. A.*, March 12, 1921), says is to trace the part industry plays in producing the more common diseases seen in all classes of the community. If the effects of industry were only in the production of the specific occupational diseases, the problem would be comparatively easy and relatively unimportant. Easy, because the causal relation between the industrial condition and the resulting disease is manifest. Relatively unimportant, because the number of workers engaged in processes giving rise to specific industrial diseases are few in comparison with the vast army of workers who are exposed to the less specific hazards of irritating dust or fumes, of localized fatigues, of insanitary conditions, or who are constantly subjected to the monotony and general fatigue effects of modern industry.

APPLICATION OF CERTAIN PHYSICAL EFFICIENCY TESTS.—In the opinion of Verner T. Scott, Mitchell Field, L. I., N. Y. (*Journal A. M. A.*, March 12, 1921), Schneider's test does not supplant, but should be used in conjunction with, a thorough physical examination. For use with aviators and athletes, this is the best test so far offered for measuring physical efficiency and fatigue.

GALLBLADDER DISEASE.—Donald S. Adams, Worcester, Mass. (*Journal A. M. A.*, March 12, 1921), analyzes the results of operations on the gallbladder. Of 135 patients on whom a cholecystectomy was performed, 71.8 per cent. are well; 18.4 per cent. are improved and 9.8 per cent. remain unimproved. Of 70 cases of cholecystectomy, 82.8 per cent. of the patients are well; 10 per cent. are improved and 7.2 per cent remain unimproved.

THE JOURNAL

OF THE

Missouri State Medical Association

JULY, 1921.

EDITORIALS

REFERENDUM CERTIFIED

The referendum on the medical college law was completed and filed with the secretary of the state on June 19 with a total of 76,676 names on the petitions. On June 22 the secretary of state notified the attorney-general that all legal requirements had been filed and that the law would be placed on the ballot. This act suspends the operation of the law until the next general election in November, 1922. Until that time the old law, which requires all applicants to be graduates of a reputable medical school, will be in operation.

That the attempt to refer the law to the people had the approval of intelligent laymen and the large majority of physicians is evidenced by the interest in the undertaking which many citizens manifested in the campaign and by editorial comments in the newspapers. From the *St. Louis Globe-Democrat* we quote an opinion that reflects the whole situation in a few lines. This paper says:

"It was a protest of private citizens against a law which was opposed by the best elements of the state when it was before the legislature and when it was before Gov. Hyde for his approval or disapproval. This paper fought the bill, believing it to be a pernicious measure, destructive to the advancement of medical education and medical science, and we appealed to Gov. Hyde to veto it for these reasons. We did not approve the referendum because of the convictions we have often expressed, but if the application of the referendum amendment to the constitution is ever justifiable at all it is in such a case as this.

"The provision authorizing the referendum being a part of the supreme law of the state, and an appeal to the people having been made on this measure in accordance with the law, there exists an accomplished fact which cannot be ignored, nor, under the circumstances, do we wish to ignore it. The operation of the medical college law has been suspended by the referendum and it will be submitted to the people for their approval or disapproval. That being the case, we shall, with all our heart, urge its repeal by the people."

The campaign to obtain signatures to the petition on the referendum was a strenuous

one, but it is merely the beginning of the effort to repeal the law. We must constantly keep before the people between now and November, 1922, the reasons why this law should be repealed. There was opposition to the campaign for signatures in certain quarters by persons who were interested in establishing low grade medical schools which would be wholly independent of the state board of health concerning the equipment and teaching facilities of the students, yet the board would have been compelled to examine the graduates.

RURAL SANITATION IN MISSOURI

Among the pressing needs in public health work in Missouri is the enlightening of the people in rural communities in regard to the benefits of sanitation and hygiene—rural sanitation. For a number of years efforts have been made by the state board of health to induce the legislature to appropriate money for this purpose, but these efforts were fruitless until this year when the Fifty-First General Assembly appropriated \$20,000 for rural sanitation. It is expected that this sum will be matched by the donation of a similar amount from the federal government, while the International Health Board and the American Red Cross will furnish field workers and personnel of the staff representing similar sums. To these sums the counties in which the work will be conducted are expected to contribute an amount equal to the amount expended in the county, so that the board anticipates the accumulation of a fund approximating \$100,000 to be expended in rural sanitation. The co-operation of the federal government with the state in our efforts to improve public health conditions is the realization of the proposition voiced by Dr. W. J. Ferguson in his president's address before our Association at the meeting in St. Joseph last May. Dr. Cortez F. Enloe of Jefferson City, who was recently elected secretary of the state board of health, has now been elected state health commissioner and the board has definitely determined to inaugurate work on rural sanitation.

As state health commissioner, Dr. Enloe will have an opportunity of inaugurating one of the most important health activities of the board and of laying the foundation for public health work in rural communities that will have a far-reaching influence upon the health standards of the state. The board has engaged Dr. Thomas T. Parran of the United States Public Health Service to have immediate supervision of the work, his experience in this direction especially fitting him for the undertaking.

Health work in rural districts does not differ materially from similar work in the cities. The same diseases prevail in both sections and human nature is fundamentally identical in city or country. Superficial thinking has led some persons to assume that country life makes for healthier people than city life, but that is an exploded theory. It is true that the outdoor air is purer, the sunlight more plentiful in the country than in the city, but fresh air and sunlight do not alone give strength and vigor. In the country districts we find too often the sunlight shut out of the kitchen or living rooms of the home and fresh air is excluded by tightly sealed doors and windows. The water supply not infrequently has been drawn from the same well for generations and often becomes polluted from drainings from the household and outhouses. The scattered population of rural sections facilitates the concealment of contagious disease, and the general lack of inspection of houses, schools, and places of meeting accounts for the development of numerous unsanitary conditions. The dangerous nature of such conditions cannot be comprehended by a people uninformed of the insidious processes by which disease originates and spreads. This new undertaking of the state board of health will supply the means of conveying to the people in rural districts the knowledge they now lack and encourage the establishment of measures to eradicate disease breeding places and infuse an intelligent conception of the benefits of health protection for themselves and their children. As this knowledge increases and the benefits of preventive medicine to the human body become apparent, the people will give more support to the movement for a full time health officer in each county.

This is a phase of health work on the part of the state which the county medical societies can enter with propriety and co-operate with the state board of health to encourage the sympathetic support of the work by the people of the county.

ADVERTISING MEDICINE

There is a growing sentiment in the organized medical profession that a closer co-operation of the newspapers and the medical profession for the instruction of the people on health topics is the ideal method of accomplishing the main purpose of the press, both lay and medical, namely, the instruction of the people. Of course, in this instance it means the instruction of the people on how to conserve health. Incidentally, such co-operation would eliminate much of the humbuggery and quackery that now fool the unin-

formed. That the newspapers are willing to lend their columns to this sort of writing is attested by the articles which appear daily and weekly in practically all metropolitan newspapers, describing modern methods of treating well-known diseases. These articles are usually furnished by reputable physicians and scientists and, in accord with the practice of the press, the name of the person responsible for the statements is published. This practice is susceptible of so much abuse and misinterpretation that it is repugnant to the best type of physician, even though in the absence of a better method he may permit the use of his name in order that important information may be given to the people.

Lately we have observed a more frequent use of a superior method of instructing the people on health topics, namely, the use of the name of some well-known institution or medical organization as the source of the information. Now this is, in our opinion, the proper method and the only sure manner in which medical knowledge can be conveyed to the people without the prejudicial thought that always surrounds individualistic opinions. We said in the beginning of this comment that the sentiment in favor of this impersonal method of presenting health information in newspapers was growing, and we have high authority for this statement, since Dr. Hubert Work, president of the American Medical Association, voiced precisely this desire for co-operative activity between the newspapers and the medical profession in his opening speech to the House of Delegates at the Boston meeting last month.

"Physicians meet, discuss, learn and agree," said Dr. Work. "Those for whom it is all done hear nothing of it and are brought no closer. Medicine should be advertised to show what it has done and can do. It should be popularized through public acquaintance. Advertise the achievements of medicine without naming the physicians who are doing, or have done the work, if now living. Those who are scientists but never personal advertisers resent the appearance of their names in the public print, for scientists first wish to prove a thing and trust to the truth to exploit it." And Dr. D. W. Murray, Speaker of the House of Delegates, speaking on the same topic, suggested that the American Medical Association should "appoint editors and create a demand for a medical feature section of the 900 great Sunday papers in this country, taking a different subject or different phases of a popular subject for each issue; e. g., child welfare, tuberculosis, cancer, personal hygiene, communicable diseases, and like topics."

Some years ago, the Missouri State Medi-

cal Association undertook to convey to the people in Missouri certain information on hygiene, sanitation, and preventive medicine, and sent prepared articles to a large number of county newspapers in the state. Many of the papers published the articles while some of them did not do so. The war and other pressing matters interrupted the work and it has not been renewed. The Red Cross is doing similar service in the *St. Louis Star*, and the Tuberculosis Society always finds the columns of the newspapers open to contributions from their body. The spirit of willingness is not therefore wanting on the part of the lay press, but there is a lack of co-ordinated and systematic preparation and issuance of articles for lay readers. Even though another proposition advocated by Dr. Murray—the establishment of a magazine to popularize health protection—should be realized, and it has been seriously considered by the American Medical Association for a number of years, the use of prepared articles would still have a large field of influence. Of course the undertaking, whether nation-wide under the auspices of the American Medical Association or state-wide conducted only by the state medical associations, would require the active co-operation of many members of the organization, but we do not doubt that this help would be freely given if it were found that the lay press would respond with a similar degree of co-operation.

THE AMERICAN MEDICAL ASSOCIATION AT ST. LOUIS IN 1922

At the Boston meeting of the American Medical Association last month, the House of Delegates selected St. Louis as the place of meeting for 1922. The decision was reached after the board of trustees had recommended St. Louis and no other city contested for the honor although invitations had been received from several cities.

It is always an honor to entertain our national organization and we know that the members in St. Louis and other parts of the state will exert themselves to the utmost in order to make the 1922 meeting one of the most successful in the history of the organization.

St. Louis possesses every facility for the occasion and particularly in regard to the section meeting places. The hotel accommodations have greatly increased since 1910 when the Association last met in St. Louis, and the central location of the city should and probably will attract an attendance that will equal the registration at any city in recent years.

The preparations for the meeting will of course entail considerable thought and labor on the part of the members in St. Louis, but

it is certain that every one will contribute his earnest support to make the occasion a memorable one and that the arrangements will insure ample space for every department of the Association, well grouped in the central part of the city.

NEWS NOTES

A PHYSICIAN is needed at Tulip, Monroe County, Mo. It is a small town, about ten miles south of Madison, with good surrounding country. Any physician interested in this location may learn the particulars from Dr. P. C. Davis, Madison, Missouri.

DR. E. F. DEVILBISS of Kansas City, who has been associated with Dr. G. Wilse Robinson in the management of the Puntun Sanitarium for several years, has recently acquired an interest in the Grandview Sanitarium, Kansas City, and will be associated with Dr. S. S. Glasscock in conducting that institution in the future.

THE following officers were elected at the Boston meeting of the American Medical Association, June 10: President-elect, Geo. E. de Schweinitz, Philadelphia; vice president, Frank B. Wynn, Indianapolis; secretary, A. R. Craig, Chicago (re-elected); treasurer, W. A. Pusey, Chicago (re-elected). St. Louis was selected as the place of meeting for 1922.

A PHYSICIAN is needed at St. Paul, Missouri, a town of 150 inhabitants in St. Charles County, 48 miles from St. Louis, and 18 miles from St. Charles. It is a Catholic community, the people being of German and Irish extraction, all speaking English. It is made up of well-to-do farmers. Any member interested in the location may obtain further information by addressing Mr. Fred Hoecker, postmaster, St. Paul, Mo.

DR. F. N. GORDON, Supervisor of the Ninth District of the Bureau of War Risk Insurance, St. Louis, arranged a special course for the week of June 6 to 11, in the diagnosis of tuberculosis. This course was offered to about eighteen physicians who are on duty with the Bureau of War Risk Insurance at various points in the Ninth District, which includes the States of Missouri, Kansas, Iowa and Nebraska. The course followed in general outline one which was given by the public health service last year, but included, in addition to the actual clinical work at the public health service hospitals and at Mt. St. Rose Sani-

tarium, some special lectures by well-known experts in tuberculosis along the lines which they were particularly interested in. It is expected that this course will be repeated in the near future and that other officers of the War Risk Insurance Bureau will be invited to St. Louis to take it.

Dr. J. W. BRUTON of Ozark has been elected superintendent of the State Sanatorium for Incipient Tuberculosis to succeed Dr. W. A. Newman, resigned, Dr. Bruton assuming his duties on July 2. Dr. Bruton graduated from the Barnes Medical College in St. Louis in 1893 and has practiced in Christian County for many years. Dr. Newman has been superintendent for the past four years and during that time the capacity of the institution has been taxed to care for those applying for treatment. When Dr. Newman took charge there were 165 patients at the Sanatorium, but the number gradually increased until now there are 241 patients in the hospital and 85 applicants on the waiting list. Dr. Newman intends to enter private practice at Monnett, Mo.

THE Research Information Service of the National Research Council has recently compiled information about funds for scientific research. From this compilation it appears that there are hundreds of special funds, trusts, or foundations for the encouragement or support of research, in the mathematical, physical and biological sciences, and their applications in engineering, medicine, agriculture and other useful arts. The income from these funds, which amounts annually to at least fifty million dollars, is used principally for prizes, medals, research scholarships and fellowships, grants and sustaining appropriations or endowments. So numerous have been the requests to the Research Council for information about sources of research funds, availability of support for specific projects and mode of administration of particular trusts or foundations, that the Research Information Service has created a special file which it is proposed to keep up to date in order to answer the questions of those interested in such funds. Furthermore, in order to give wider publicity to the immediately available information about research funds, the Council has issued a bulletin under the title "Funds Available in 1920 in the United States of America for the Encouragement of Scientific Research." Inquiries concerning the bulletin or for information about research funds should be addressed, National Research Council, Information Service, 1701 Massachusetts Avenue, Washington, D. C.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.

MISSOURI STATE MEDICAL ASSOCIATION

Sixty-Fourth Annual Meeting, held at St. Joseph,
May 24, 25, 26, 1921

MINUTES OF THE HOUSE OF DELEGATES

Hotel Robidoux

Tuesday, May 24, 1921—Morning Session

The House of Delegates of the Sixty-fourth Annual Meeting was called to order by the president, Dr. W. J. Ferguson, in the Rathskellar of the Hotel Robidoux at St. Joseph, at 10:00 a. m., Tuesday, May 24, 1921. At roll call, the following officers and delegates responded:

OFFICERS

President, W. J. Ferguson, Sedalia.
Vice-President, W. C. Gayler, St. Louis.
Secretary, E. J. Goodwin, St. Louis.
Treasurer, J. Franklin Welch, Salisbury.

COUNCILORS

1st District, E. L. Crowson, Pickering.
2nd District, O. C. Gebhart, St. Joseph.
7th District, T. J. Downing, New London.
9th District, A. R. McComas, Sturgeon.
10th District, D. A. Barnhart, Huntsville.
11th District, G. W. Hawkins, Salisbury.
12th District, Spence Redman, Platte City.
13th District, Franklin E. Murphy, Kansas City.
14th District, C. T. Ryland, Lexington.
15th District, L. J. Schofield, Warrensburg.
16th District, T. B. M. Craig, Nevada.
17th District, Guy Titsworth, Sedalia.
18th District, J. P. Burke, California.
22nd District, H. L. Reid, Charleston.
26th District, W. H. Breuer, St. James.

COUNTY DELEGATES

Atchison W. G. Safford, Tarkio
Audrain Fred Griffin, Mexico
Bates T. F. Lockwood, Butler
Benton E. L. Rhodes, Warsaw
Boone J. E. Thornton, Columbia
Buchanan F. H. Spencer, St. Joseph

COUNTY DELEGATES

Buchanan	J. I. Byrne, St. Joseph
Callaway	M. O. Briggs, Fulton
Cape Girardeau	B. W. Hays, Jackson
Carroll	R. F. Cook, Carrollton
Carter-Shannon	T. W. Cotton, Van Buren
Cass	H. S. Crawford, Harrisonville
Chariton	Henry Gray, Prairie Hill
Clinton	J. T. Kimsey, Lathrop
Cooper	P. A. Brickey, Boonville
Crawford	J. H. Parker, Steelville
Daviess	L. R. Doolin, Gallatin
DeKalb	H. P. Yeater, Maysville
Franklin	John Isbell, Washington
Greene	C. W. Russell, Springfield
Greene	W. R. Beatie, Springfield
Grundy	G. W. Belshe, Trenton
Holt	C. L. Evans, Oregon
Jackson	H. P. Kuhn, Kansas City
Jackson	G. W. Robinson, Kansas City
Jackson	R. H. Meade, Kansas City
Jackson	R. W. Holbrook, Kansas City
Jackson	P. V. Woolley, Kansas City
Jasper	Allen B. Clark, Joplin
Johnson	O. B. Hall, Warrensburg
Lafayette	W. A. Braecklein, Higginsville
Lawrence-Stone	H. L. Kerr, Crane
Linn	Roy R. Haley, Brookfield
Marion	J. J. Bourn, Hannibal
Pemiscot	J. B. Luten, Caruthersville
Pettis	A. J. Campbell, Sedalia
Phelps	S. L. Baysinger, Rolla
Platte	A. S. Herndon, Camden Point
Putnam	C. P. Vores, Unionville
Ralls	T. J. Downing, New London
Randolph	C. O. Cuppidge, Moberly
Ray	R. L. Hamilton, Richmond
Reynolds	S. B. Ralls, Ellington
St. Charles	B. P. Wentker, St. Charles
St. Louis	O. W. Koch, Clayton
Saline	L. S. James, Blackburn
Schuyler	J. H. Keller, Lancaster
Scotland	E. E. Parrish, Memphis
St. Louis City	W. E. Holdenried, St. Louis
St. Louis City	J. J. Link, St. Louis
St. Louis City	Wm. H. Mook, St. Louis
St. Louis City	Wm. H. Vogt, St. Louis
St. Louis City	C. H. Neilson, St. Louis
St. Louis City	Emmett P. North, St. Louis
St. Louis City	Wm. C. G. Kirchner, St. Louis
St. Louis City	E. Lee Dorsett, St. Louis
St. Louis City	H. S. McKay, St. Louis
St. Louis City	Paul Y. Tupper, St. Louis
St. Louis City	R. M. Funkhouser, St. Louis
St. Louis City	M. A. Bliss, St. Louis
St. Louis City	J. Curtis Lyter, St. Louis
St. Louis City	M. B. Clopton, St. Louis
St. Louis City	Neil Moore, St. Louis
St. Louis City	F. Reder, St. Louis
St. Louis City	E. Schisler, St. Louis

The minutes of the sixty-third annual meeting, held at Jefferson City, April 6, 7, 8, 1920, were read and approved.

The president read the resignation of Dr. A. H. Hamel of St. Louis as counselor for the 20th district. On motion the resignation was accepted.

The president appointed Dr. John C. Marfit of St. Louis as counselor for the 20th district to fill the unexpired term of Dr. A. H. Hamel.

The president announced that he had no message to deliver to the House of Delegates, preferring to incorporate his recommendations in his annual address to be delivered before the General Session.

Dr. Floyd Spencer, chairman of the committee on arrangements, announced that the Buchanan County Medical Society had provided a smoker and enter-

tainment for the members, to be given at the Elks' Club at 9:30, Wednesday night. For the entertainment of the visiting ladies he announced the following program which had been arranged by Mrs. Floyd Spencer, chairman of the ladies' reception committee: A reception Tuesday, at 4 p. m., in the Japanese Room of the Hotel Robidoux; a dinner in the Tea Room of the Leader Department Store on Wednesday, at 1 o'clock; an auto ride through the city and to the Country Club, where there would be entertainment and refreshments; in the evening, a theatre party at the Orpheum Theatre.

The secretary read his report which was referred to the Council. (See page 248.)

The report of the treasurer was read by Dr. Welch and on motion it was referred to the Council. (See page 251.)

The committee on scientific work reported as follows:

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

The committee on scientific work presents the program as printed and hopes it will meet with your approval. The sessions are well filled with papers, there being a few more than were listed during the past few years, but we believe all the papers can be read within the time allotted if there is not too much variation from the twenty-minute rule. The roentgenologists and the pediatricians have supplied us with papers on those subjects. We have a visitor who is a former member of our Association, Dr. Leo C. Huelsman of Colorado, who will give us a paper on tuberculosis.

Respectfully submitted,

M. B. CLOPTON,
C. C. CONOVER,
E. J. GOODWIN, *Chairman*.

On motion the report was adopted.

Dr. Funkhouser read the report of the committee on health and public instruction.

Dr. Bliss called attention to an error in the report concerning the Central Board of Control for the eleemosynary institutions. He stated that the Confederate Soldiers' Home and the Federal Soldiers' Home had been eliminated from the list of eleemosynary institutions in the engrossed bill, and the number composing the Board of Control reduced from eight to six. He moved that the report be amended to conform to these alterations. The amendment was adopted, after which the report as amended was adopted. (See page 248.)

Dr. R. S. Vitt read the report of the committee on defense. On motion the report was adopted. (See page 250.)

The committee on medical education had no report.

The committee on cancer and the committee on vaccination also failed to make a report.

The report of the committee on blindness was read by Dr. E. P. North, chairman. (See page 250.)

The committee on necrology had no report.

The secretary read the resignation of Dr. G. W. Vinyard, chairman of the committee on necrology, which he was compelled to submit on account of illness. On motion the resignation was accepted.

Dr. A. R. McComas introduced an amendment to the by-laws, as follows:

AMENDMENT TO BY-LAWS

Amend Section 1, Chapter IX of the By-laws, by striking out the word "three" in line one and inserting in lieu thereof the word "five," so that the section shall read as follows:

Section 1. An assessment of five dollars (\$5.00) per capita on the membership of the component societies is hereby made the annual dues of this Association, of which one dollar (\$1.00) shall be credited to subscription of *THE JOURNAL* for one year, and one dollar (\$1.00) shall be credited to the legislative fund. The secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the secretary of this Association on or before December 31st in advance of each annual session.

The president announced that this amendment would lie over for one day and be referred to the committee on constitution and by-laws for report.

The president announced the following committee on nominations:

COMMITTEE ON NOMINATIONS

J. C. Lyter, St. Louis.
H. L. Reid, Charleston.
C. T. Ryland, Lexington.
A. J. Campbell, Sedalia.
G. W. Robinson, Kansas City.
J. F. Welch, Salisbury.
W. H. Breuer, St. James.
J. E. Thornton, Columbia.
H. L. Kerr, Crane.
F. H. Spencer, St. Joseph.
On motion the House adjourned until 3 p. m.

Afternoon Session

The House of Delegates was called to order by the president at 3:10 p. m.

The report of the Council was read by the chairman, Dr. A. R. McComas, as follows:

REPORT OF THE COUNCIL

The executive committee of the council has held four meetings since our 1920 annual session. In August, 1920, the American Medical Association notified us that they could not print our *Journal* after December 31, 1920, because of the crowded condition of their printing department. This made it necessary to arrange for printing the *Journal* at St. Louis. The secretary obtained bids from four firms, the highest of these being \$1,245 per issue for an eighty page journal, the lowest \$692 per issue for an eighty page journal and \$532 for a sixty-four page journal. The *Journal* has usually contained from seventy-two to eighty pages in each issue, but your committee accepted the bid on sixty-four pages, believing that this increase was as much as we should undertake.

The cost of producing the *Journal* has increased three-fold since 1915. In that year the cost averaged \$237 monthly. From that time the prices steadily increased until in 1920 the average monthly charge was \$483, and for the first four months of 1921 the average monthly cost is \$670. The cost of making electrotypes for illustrations has also more than doubled.

The income from the advertising department has increased but has not kept pace with the increased cost of production. In 1915 our net income from advertising averaged \$373.22 monthly; in 1920 it was \$435.92 monthly, and for the first four months in 1921 has averaged \$525.21 monthly.

The work at the legislature also drew more heavily on us than in previous years. Higher railroad, telegraph and telephone rates and ordinary expenses of watching bills made the session an expensive one for us. There is every reason to expect the next session to be just as expensive, if not more so. We have built up a good-sized sinking fund, but cannot add to it this year and should not draw on it for running expenses. The executive committee

feels, therefore, that the annual dues should be increased and has submitted an amendment to the committee on constitution and by-laws to increase the dues to \$5.00. The council as a whole indorses the amendment.

The referendum on Senate Bill 433 was not formally considered by the executive committee because we thought that such a question should be decided at the full meeting of the Association.

On motion the report was adopted.

The report of the Committee on Hospitals was read by the secretary in the absence of the chairman of the committee, Dr. H. E. Pearse. On motion the report was adopted. (See page 246.)

Dr. M. A. Bliss read a resolution concerning the question of calling a convention to amend the state constitution. The resolution follows:

Whereas, a special election will be held on August 2, 1921, for the purpose of voting upon the question whether a convention shall be held to revise and amend the constitution of Missouri, and

Whereas, the Missouri State Medical Association is on record as favoring a revision of our constitution along modern and progressive lines, without sacrificing any of its sound and meritorious features, and especially for the purpose of making possible the creation of an up-to-date Health Department, be it, therefore,

Resolved, That the Missouri State Medical Association renews its pledge of support of this movement and urges its members to work and vote for a constitutional convention at the coming special election.

In explaining the resolution, Dr. Bliss said:

"Members of the Missouri State Medical Association should concern themselves and earnestly support in every practical way the present aggressive campaign for a new state constitution, for the following reasons, which suggest themselves as both urgent and timely:

"First. The Missouri of 1921 cannot be expected to make substantial progress under the constitution of 1875 any more than a railroad could be operated on stage-coach principles. While the constitution was the best that could be devised under the social, economic, educational and ethnographic conditions of forty-six years ago, it is apparent that these have so fundamentally changed in character as to render many vital particulars of our present organic law both obsolete and wholly inadequate.

"Second. The members of the Missouri State Medical Association, in common with all progressive Missourians, generally speaking, should have at heart the greatest good of the greatest number, obtainable under the terms of a modern and liberal constitution.

"Third. As physicians they have a particular interest in revising the constitution, to the end that:

"(a) The public health may be conserved under broader powers delegated, constitutionally, to a modernized and non-political state board of health.

"(b) The management of eleemosynary state institutions be made more centralized and responsible, consequently more efficient in operation and more economical in administration.

"(c) The present system of caring for the insane by counties may be radically changed to state responsibility and care, and in this connection county government in Missouri is rapidly breaking down. The Legislature periodically adds county officials without providing any method of financing them, thus compelling counties to support them out of already overworked county budgets.

"Fourth. Physicians are keenly interested in public education. Under the present constitution, Missouri's educational system has taken such a slump as to cause the Russell Sage Foundation to rank Missouri thirty-fourth in education, though Missouri ranks first in poultry, first in lead and zinc, second in mules, fifth in value of farm property,

sixth in farm crops and seventh in taxable wealth. The school crisis in Missouri now challenges patriotic consideration and even professional anxiety. If educational qualifications are to be increasingly demanded for the profession of medicine, then the basis of these qualifications, logically to be discovered in our public school system, must be conserved at every sacrifice. Such can be conserved merely by liberalizing the restriction of the taxing power on school districts. The present constitutional maximum of sixty-five cents per \$100.00 valuation is the root of the whole evil, and it cannot be changed except by revision in the rural part of Missouri, while in cities the constitutional maximum is 100 cents per \$100.00 valuation. In St. Louis we are obliged to vote at annual special elections even to maintain such a maximum.

"Fifth. Physicians, in common with all citizens, should be vitally interested in a new constitution through a revision convention, because only in that way can Missouri have a more just and a more scientific taxation system; because only in that way can needed court reforms operate; because only in that way can we have a state budget system; because only in that way can St. Louis ever hope to annex any part of St. Louis County and otherwise go forward with less strain on its financing; because only in that way can we have a short ballot in the state; because Illinois and other neighboring states are now revising their organic laws and Missouri cannot afford to lag behind them."

On motion the resolution was adopted.

Dr. Funkhouser moved that the president appoint a special committee of three to consider ways and means for the promotion and establishment of a state general hospital, and the completion of medical education at the State University, and that it be authorized to draft a bill for this purpose to be presented to the next legislature; the committee to make report of the progress of its work at the next meeting of this Association. Seconded and carried.

The president appointed the following on the committee authorized by Dr. Funkhouser's motion: Dr. R. M. Funkhouser, St. Louis; Dr. W. H. Breuer, St. James; Dr. Frank G. Nifong, Columbia.

The secretary read the following resolution submitted by the National Anesthesia Research Society:

Whereas, The safety of patients, the advancement of surgery and the requirements of hospital service demand the rapid extension of the specialty of anesthesia, therefore, be it

Resolved, That the Missouri State Medical Association hereby petitions and urges the House of Delegates and the Council on Scientific Assembly to establish a Section on Anesthesia in the A. M. A. during the Boston Meeting, June, 1921.

The secretary read a letter from the National Anesthesia Research Society, as follows:

"This resolution is now being considered by the Council on Scientific Assembly and it has the endorsement and enthusiastic support of the incoming officers of the A. M. A. The resolution will be introduced in the House of Delegates by Dr. F. C. Warnshuis, vice-chairman, and will be seconded by delegates representing entire state societies that have already acted favorably in the matter.

"The resolution is also being supported by petitions signed by hundreds of Fellows of the A. M. A. in all parts of the country.

"In anticipation of a permanent Section the Council on Scientific Assembly has granted the anesthetists one of the sessions of the Section on Miscellaneous Topics of the Boston meeting for a program of pertinent papers.

"The recent election of Dr. Wm. T. Morton, one of the discoverers of anesthesia, to the Hall of Fame, and the diamond jubilee year of Morton's

first use of ether make the establishment of a Section on Anesthesia a most appropriate event in the progress of medicine.

"Awaiting favorable action in this matter, we remain, in behalf of the Associated Anesthetists of the United States,

Very respectfully yours,

(Signed) F. H. MECHAN, M. D.
Secretary Interstate and American
Assn. of Anesthetists.

(Signed) T. T. FRANKENBERG,
Secretary National Anesthesia Research Soc."

On motion the resolution was adopted.

The secretary read a letter from the St. Louis Chamber of Commerce, requesting our Association to become a member of the St. Louis Chamber of Commerce, the annual dues being \$50.00. Dr. Baysinger moved that the invitation be declined. The motion was seconded. Dr. Funkhouser moved to amend the motion of Dr. Baysinger by adding the words "at present." This amendment being accepted, the motion as amended was adopted.

The secretary read a letter from the St. Louis Convention Bureau, requesting our Association to endorse an invitation which the St. Louis Medical Society had extended to the American Medical Association for that body to meet in St. Louis in 1922.

Dr. Baysinger moved that the Association endorse the action of the St. Louis Medical Society, and join that body in extending an invitation to the American Medical Association to meet in St. Louis in 1922. The motion was seconded and carried.

The secretary read a telegram from Dr. Wm. R. Bathurst, secretary of the Arkansas State Medical Association, and a telegram from Dr. Seale Harris, secretary of the Southern Medical Association. The telegrams follow:

Birmingham, May 24, 1921.

Missouri State Medical Association,

In convention assembled at St. Joseph, Mo.

Greetings. We hope you are having a most successful meeting.

Southern Medical Association,
Seale Harris, Secretary-Editor.

Little Rock, May 24, 1921.

Dr. E. J. Goodwin,

Sec'y Missouri State Medical Association in convention assembled, St. Joseph, Mo.

The Arkansas Medical Society in annual session last week at Hot Springs instructed me to send greetings to you in annual session and to most cordially invite and urge your members to come to Hot Springs this November when the profession of Arkansas and of Hot Springs are host to your own and our own Great Southern Medical Association.

William R. Bathurst,
Secretary-Editor Arkansas Medical Society.

Dr. McComas moved that the secretary acknowledge receipt of the telegrams and wire appropriate replies. The motion was seconded and carried.

The selection of the next place of meeting being the next order of business, Dr. E. C. Robichaux of Excelsior Springs invited the Association to meet at Excelsior Springs in 1922.

Dr. Woolley seconded the nomination of Excelsior Springs.

Dr. S. L. Baysinger nominated Jefferson City for the next place of meeting. On a viva voce vote Excelsior Springs was chosen as the next place of meeting.

The president read the resignation of Dr. Morfit as councilor of the 20th district. On motion the

resignation was accepted, and the secretary instructed to notify the nominating committee of the vacancy.

Dr. T. B. M. Craig moved that Mr. Tom Bodine of Paris, Mo., editor of the *Paris Mercury*, and Mr. Ed. M. Watson of Columbia, editor of the *Columbia Tribune*, be elected honorary members of our Association. Dr. A. R. McComas seconded the motion. The motion carried unanimously.

Dr. McComas moved that the secretary be instructed to inform Messrs. Bodine and Watson of their election to honorary membership, which motion was duly seconded and carried.

On motion adjourned to 1:30 p. m. Wednesday.

Wednesday, May 25—1:30 P. M.

The House of Delegates was called to order by the president at 1:45 p. m.

The nominating committee reported as follows:

REPORT OF THE NOMINATING COMMITTEE

Your nominating committee begs leave to report the following nominations:

First Vice-President, B. W. Hays, Jackson.

Second Vice-President, C. W. Russell, Springfield.

Third Vice-President, Thornton E. Moore, Trenton.

Fourth Vice-President, G. O. Cuppaidge, Moberly.

Fifth Vice-President, H. W. Carle, St. Joseph.

Delegates to the American Medical Association for two years: R. E. Schlueter, St. Louis; J. C. Lyter, St. Louis.

Member Committee on Health and Public Instruction for five years, R. S. Vitt, St. Louis.

Chairman Committee on Health and Public Instruction, H. E. Pearse, Kansas City.

Defense Committee:

C. E. Hyndman, St. Louis.

R. S. Vitt, St. Louis.

R. E. Schlueter, St. Louis.

Councilors:

1st District, W. G. Safford, Tarkio.

14th District, C. T. Ryland, Lexington.

16th District, T. B. M. Craig, Nevada.

19th District, W. A. Clark, Jefferson City.

20th District, H. S. McKay, St. Louis, for one year to fill the unfinished term of Dr. Hamel.

21st District, T. W. Cotton, Van Buren.

On motion the report was adopted.

NOMINATION OF PRESIDENT

The nominations for president being the next order of business, Dr. J. C. Morfit of St. Louis nominated Dr. A. H. Hamel of St. Louis for president. The nomination was seconded by Dr. C. H. Neilson and by Dr. Welch of Salisbury.

Dr. Welch moved that the nominations be closed and that Dr. Hamel be elected by acclamation. This motion was duly seconded and carried unanimously, and Dr. A. H. Hamel was declared elected president of the Association.

The president appointed Drs. J. C. Morfit and C. H. Neilson to escort Dr. Hamel to the chair, and he was duly installed as president for the ensuing year. In accepting the office, Dr. Hamel expressed his appreciation of the honor the Association had conferred upon him, and his sense of realization of the obligations that the office laid upon him. He invited the co-operation and support of all the officers and members and promised to give his undivided attention to the duties he assumed.

"As we approach the problems during the coming year," he said, "it is a comfort to live in the

past with those great apostles of organized medicine, Drs. Frank J. Lutz and William L. Allee, who did so much to raise the standard of medicine in Missouri. It will always be a great satisfaction to be advised and helped by personal conference with our beloved friend, the Nestor of our profession, Dr. A. W. McAlester. I want to add that one of the anticipated pleasures I look forward to is the association with that fearless, red-blooded, militant leader, Dr. Herman E. Pearse, whose name is written large in the medical standards of our state. I am grateful that it was my privilege to be associated with these members in the past and it will be my earnest desire to follow the paths they have illuminated."

Dr. O. B. Hall of Warrensburg reported for the committee on constitution and by-laws that the amendment to chapter IX of the by-laws was approved by the committee. The amendment follows:

AMENDMENT TO THE BY-LAWS

Amend Section 1, Chapter IX of the By-laws by striking out the word "three" in line one and inserting in lieu thereof the word "five" so that the section shall read as follows:

Section 1. An assessment of five dollars (\$5.00) per capita on the membership of the component societies is hereby made the annual dues of this Association, of which one dollar (\$1.00) shall be credited to subscription to *THE JOURNAL* for one year, and one dollar (\$1.00) shall be credited to the legislative fund. The secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the secretary of this Association on or before December 31st in advance of each annual session.

Dr. Hall moved the adoption of the amendment. Dr. H. S. Crawford moved that the report be amended by substituting the word "four" for the word "five" for the amount of assessment. The motion to amend the report was seconded but on vote it was lost. The original motion was then put and the amendment to chapter IX of the by-laws as reported by the committee was adopted unanimously.

Dr. J. Franklin Welch informed the House of Delegates that Dr. Thomas Chowning of Hannibal, one of the vice-presidents of the Association, was ill at his home and moved that the following telegram be sent to him.

The motion was seconded and amended to include the name of Dr. J. D. Griffith of Kansas City who was also confined to his bed by illness. On motion the telegrams were ordered sent to Drs. Chowning and Griffith. The telegrams follow:

To, Drs. Thomas Chowning, Hannibal, and J. D. Griffith, Kansas City:

The House of Delegates adopted the following resolution:

The House of Delegates of the State Medical Association in session assembled recognizing the faithful service you have rendered the profession and hearing of your illness, do extend to you our deep sympathy and our hopes for your rapid recovery.

E. J. GOODWIN, Secretary.

On motion the meeting adjourned *sine die*.

MINUTES OF THE COUNCIL

Tuesday, May 24, 1921

The annual meeting of the council was held in the Rathskeller of the Hotel Robidoux, and was called to order by the chairman, Dr. A. R. McComas, at 1:30 p. m., Tuesday, April 24, 1921. The following members were present:

1st District, E. L. Crowson, Pickering.

2nd District, O. C. Gebhart, St. Joseph.

7th District, T. J. Downing, New London.
 9th District, A. R. McComas, Sturgeon.
 10th District, D. A. Barnhart, Huntsville.
 11th District, G. W. Hawkins, Salisbury.
 12th District, Spence Redman, Platte City.
 13th District, Franklin E. Murphy, Kansas City.
 14th District, C. T. Ryland, Lexington.
 15th District, L. J. Schofield, Warrensburg.
 16th District, T. B. M. Craig, Nevada.
 17th District, Guy Titsworth, Sedalia.
 18th District, J. P. Burke, California.
 22nd District, H. L. Reid, Charleston.
 26th District, W. H. Breuer, St. James.

The minutes of the last annual meeting were adopted as published in the JOURNAL.

The chairman read the report of the executive committee as follows:

REPORT OF THE EXECUTIVE COMMITTEE

The executive committee has held four meetings since our 1920 annual session. In August, 1920, the American Medical Association notified us that they could not print our Journal after December 31, 1920, because of the crowded condition of their printing department. This made it necessary to arrange for printing the Journal at St. Louis. The Secretary obtained bids from four firms, the highest of these being \$1,245 per issue for an eighty page journal, the lowest \$692 per issue for an eighty page journal and \$542 for a sixty-four page journal. The Journal has usually contained from seventy-two to eighty pages in each issue, but your committee accepted the bid on sixty-four pages believing that this increase was as much as we should undertake.

The cost of producing the Journal has increased three-fold since 1915. In that year the cost averaged \$237 monthly. From that time the prices steadily increased until in 1920 the average monthly charge was \$483, and for the first four months of 1921 the average monthly cost is \$670. The cost of making electrotypes for illustrations has also more than doubled.

The income from the advertising department has increased but has not kept pace with the increased cost of production. In 1915 our net income from advertising averaged \$373.22 monthly; in 1920 it was \$435.92 monthly, and for the first four months in 1921 has averaged \$525.21 monthly.

The work at the legislature also drew more heavily on us than in previous years. Higher railroad, telegraph and telephone rates and ordinary expenses of watching bills made the session an expensive one for us. There is every reason to expect the next session to be just as expensive if not more so. We have built up a good-sized sinking fund but cannot add to it this year and should not draw on it for running expenses. The executive committee feels therefore that the annual dues should be increased and has submitted an amendment to the committee on constitution and by-laws to increase the dues to \$5.00.

The referendum on Senate Bill 433 was not formally considered by the executive committee because we thought that such a question should be decided at the full meeting of the Association.

On motion the report of the executive committee was adopted as read.

The chair was authorized to appoint an auditing committee of three members, and the chair appointed the following: Doctors Hawkins, Breuer and Ryland.

The secretary's report was read as referred from the House of Delegates. (See page 248.)

On motion the report was adopted.

The treasurer's report as referred from the House of Delegates, was read and adopted.

Dr. Breuer moved that the secretary's report and the Treasurer's report be referred to the auditing committee for examination and report. Seconded and carried.

Dr. Breuer moved that the council request the House of Delegates to take favorable action on the amendment to the by-laws increasing the annual dues from \$3 to \$5. Dr. Breuer said that the council is to a very large extent responsible for the financial condition of the Association, and since the report of the treasurer indicates that we shall be unable to set aside one thousand dollars to the sinking fund and keep up with the expenses in other respects, he considered it a proper move on the part of the council to recommend the adoption of the amendment referred to.

The motion was seconded and carried.

Dr. Breuer read the report of the publication committee. (See page 251.)

On motion the report was adopted.

The president, Dr. Ferguson, was present and informed the council that the recommendations he had to offer were incorporated in his annual address, therefore he did not send any special message to the House of Delegates.

It was suggested that the president inform the council of the recommendations in an informal manner, which Dr. Ferguson did.

On motion adjourned until Wednesday, May 25, 3:00 p. m.

Wednesday, April 25, 1921

The council was called to order by the chairman, Dr. A. R. McComas, at 3:00 p. m. The councilors elected by the House of Delegates at this annual meeting were present, namely, W. G. Safford, Tarkio, First District; W. A. Clark, Jefferson City, 19th District, and T. W. Cotton, Van Buren, 24th District.

The election of the officers being the first order of business, Dr. Burke nominated Dr. E. J. Goodwin, St. Louis, for Secretary of the Association. It was moved that the nominations be closed, and Dr. Goodwin be elected by acclamation. Seconded and carried.

Dr. Burke nominated Dr. J. F. Welch of Salisbury for treasurer of the Association. Dr. Reid seconded the motion and moved that the nominations be closed and that Dr. Welch be elected by acclamation. Carried.

The election of officers of the council was the next order of business. Dr. Breuer nominated Dr. McComas for chairman of the council which was seconded numerously and on motion the nominations were closed, and Dr. McComas was elected by acclamation.

Dr. Spence Redman nominated Dr. Goodwin for secretary of the council which was duly seconded, and there being no other nominations Dr. Goodwin was elected by acclamation.

Dr. Hawkins moved that Dr. H. S. McKay, the newly elected councilor for the 20th District, be elected a member of the executive committee and that the other two members, Drs. A. R. McComas and W. H. Breuer be re-elected. The motion was seconded. It was moved that nominations be closed and that the executive committee be elected as nominated. Seconded and carried.

The auditing committee reported through the chairman, Dr. Hawkins, as follows:

We, the Auditing Committee, appointed by our chairman to audit the books of the secretary and the treasurer for the fiscal year just closed, have examined the books and find the same correct.

G. W. HAWKINS, Chairman,
 W. H. BREUER,
 C. T. RYLAND.

Dr. Breuer moved that the report of the auditing committee be adopted and spread on the minutes. Seconded and carried.

Dr. Gebhart reported that Buchanan County Medical Society had adopted a by-law requiring members of the Buchanan County Medical Society to be citizens of the United States and stated that the secretary had suggested such a by-law might be in conflict with the by-laws of the State Association, which were silent on that subject. He asked the opinion of the council in the matter.

After discussion Dr. Hawkins moved that the secretary be instructed to formulate a by-law for introduction at the 1922 meeting of the Association, requiring members to be citizens of the United States. Seconded and carried.

After an informal discussion of the work of the Association in regard to the referendum on Senate Bill No. 433, the council adjourned *sine die*.

MINUTES OF THE GENERAL MEETING

Tuesday, May 24, 1921—Morning Session

The Sixty-fourth Annual Meeting of the Missouri State Medical Association met at Hotel Robidoux, St. Joseph, on Tuesday morning, May 24, and was called to order by the president, Dr. W. J. Ferguson, of Sedalia, at 9:45.

Upon motion by Dr. O. C. Gebhart, of St. Joseph, duly seconded and carried, the reading of the minutes of the previous meeting was dispensed with.

In the absence of any of the vice-presidents, Dr. J. G. Moore was asked to take the chair while the president attended the House of Delegates' meeting.

The following papers were then presented:

"Cystitis: A Symptom or a Disease," by Dr. Clinton K. Smith of Kansas City.

Drs. H. McClure Young and Neil Moore discussed this paper, with Dr. Smith closing the discussion.

"Carcinoma of the Bladder in the Relatively Young Adult," with report of two cases, was presented by Dr. Neil Moore, of St. Louis.

Dr. Moore's paper was discussed by Drs. Clinton K. Smith of Kansas City; Clarence Martin, of St. Louis; H. McClure Young, St. Louis; W. T. Elam, of St. Joseph; Dr. Moore closing the discussion.

"Treatment of Carcinoma and Sarcoma of the Colon" was the title of the paper read by Dr. Caryl Potter, of St. Joseph.

This paper was discussed by Drs. Elam, H. K. Wallace, and Geiger, of St. Joseph, and by Drs. Engelbach, J. C. Lyter, and H. S. McKay, of St. Louis, with Dr. Potter closing the discussion.

Upon motion the meeting adjourned until 1:30 p. m.

Afternoon Session

In the absence of President Ferguson and the vice-presidents, Dr. J. G. Moore called the second session of the convention to order at 2 o'clock.

The following papers were then presented:

"Clinical Manifestations of Gall-Bladder Infection, with Personal Experience in Transduodenal Aspiration of the Bile Passages," by Drs. H. S. McKay and J. C. Lyter of St. Louis, read by Dr. McKay.

This paper was discussed by Dr. J. C. Lyter, with Dr. McKay closing the discussion.

"Duodenal Ulcer" was the title of the paper presented by Dr. H. K. Wallace of St. Joseph.

Drs. C. H. Neilson, Logan Clendenning, J. F. Binnie and C. H. Wallace discussed this paper.

Dr. H. K. Wallace closed the discussion.

"Visceroptosis, with Study of 100 Cases," was

presented by Dr. Edwin Schisler of St. Louis, who illustrated the paper by slides.

Drs. Duke and Holbrook discussed the paper, with Dr. Schisler closing the discussion.

Dr. C. Lester Hall of Kansas City took the chair.

"Psychoneurosis of War or Peace" was the subject of the paper presented by Dr. G. Wilse Robinson, of Kansas City.

Dr. C. R. Woodson of St. Joseph discussed Dr. Robinson's paper.

The following papers were then presented, but owing to the lateness of the hour, the speakers did not invite discussion of the various subjects:

"A Working Knowledge of Modern Anatomy," with lantern slides, by Dr. Marsh Pitzman, of St. Louis.

"A Case of Cardiolysis," with presentation of patient, by Dr. Elsworth Smith, of St. Louis.

"The Application of the Wassermann Report," by Dr. George Dock, of St. Louis.

"Version in Selected Cases," with lantern slides, by Dr. E. Lee Dorsett, of St. Louis.

"The Occipital Posterior Problem," with slides, by Dr. Buford Hamilton, of Kansas City.

"Further Observations in Toxemia of Pregnancy," by Dr. George C. Mosher, of Kansas City.

The paper on "Gonorrhea in Women," by Dr. Will J. Wills, of Springfield, was then read by title, after which the meeting adjourned until 7:30 p. m.

Evening Session

The third general session of the convention was called to order at 7:30 Tuesday evening by the president, Dr. W. J. Ferguson.

The following papers were presented:

"Hospitals," by H. E. Pearse, M. D., of Kansas City.

"Tuberculosis," illustrated by slides, was the subject of the talk given by Dr. Wm. Engelbach, of St. Louis.

"The Necessity for Popular Medical Education, and Some Methods by Which It May be Secured," by F. G. Nifong, M.D., Columbia.

Dr. Nifong's paper elicited discussion by Drs. McAlester, Elsworth Smith and W. W. Owen, with Dr. Nifong closing.

Adjourned until 9 o'clock Wednesday morning.

Wednesday, May, 25, 1921—Morning Session

The session was called to order by President Ferguson at 9 o'clock. Dr. McAlester was requested to take the chair during the reading of the president's address. The address elicited favorable comment from Drs. Welch, Funkhouser, McAlester and Hamilton.

It was moved by Dr. Hamilton that the State Medical Association get back of the referendum on Senate Bill No. 433.

The motion was seconded and carried with but one dissenting vote, that of Dr. Nifong, who explained his position by saying he had sensed the feeling of the people, particularly in the rural districts, in this respect and he did not believe it could be put through, but added that he was with the doctors if they decided to make the attempt.

Dr. Loeb took an opposite position from that of Dr. Nifong and stated he had found the people overwhelmingly for the referendum as soon as it was explained to them.

Dr. Seba said it was the consensus of opinion of the members of the local medical society to which he belonged, consisting of the counties of Gasconade, Maries and Osage, that since the standards required by the medical colleges were higher than those of the so-called "drugless schools," it was bringing about

a situation in which the country practitioner would be obliterated entirely, and his patients compelled to seek advice from the osteopaths and chiropractors and for this reason his Society was against the referendum.

Dr. McAlester of Columbia introduced the following resolution:

Whereas, The movement to refer Senate Bill No. 433, the so-called Medical College Bill, to a vote of the people, inaugurated by the St. Louis Medical Society and the Missouri Public Health League, was endorsed by the Missouri State Medical Association in general session at its 64th annual meeting at St. Joseph, May 25, 1921, and by the House of Delegates of the Association at the same annual session, therefore, be it

Resolved, That the secretary be instructed to send a copy of this resolution to every county medical society and to the Missouri State Board of Health.

In supporting the resolution, Dr. McAlester said the state board of health should be requested to urge deputy state health commissioners to take official action appropriate to the defense and promulgation of legislation for the preservation of human life; that the state board of health was created through the efforts of this Association and therefore should lend its co-operation in this matter, for the rejection of Senate Bill No. 433 by a vote of the people will be the means of saving human life and the mitigation of human suffering, this being the highest prerogative of good government and health being the most priceless possession of man.

The motion was seconded by Dr. Nifong, and carried.

Dr. Allison moved that Mr. Rogers be granted the privilege of the floor for three minutes. The motion was seconded and carried.

Mr. Rogers explained the necessity for prompt action in securing signers to the petitions for the referendum.

The scientific program was then taken up, the first paper, "Trachelorrhaphy," being presented by Dr. R. M. Funkhouser of St. Louis.

This was followed by a paper on "Modern Methods of Conducting Labor," by Dr. A. L. Gray of St. Joseph.

"Medical Ethics and Ideals" was the subject of the paper presented by N. M. Wetzel, M.D. of Jameson which was discussed by Dr. C. Lester Hall of Kansas City.

President Ferguson introduced Master Nevin Meyer Wetzel, the small son of Dr. and Mrs. Wetzel, as "one of the future members of the Association." Nevin favored the convention with a reading, and responded to a hearty encore.

"Vertigo: A Symptom of Interest to the Otologist, Neurologist, and Internist," was the subject of a paper presented by L. M. Sellers, M.D. of Kansas City.

This paper was discussed by Drs. E. Lee Meyers and F. R. Fry of St. Louis.

"The Importance of Correcting Small Refractive Errors for Patients with Symptoms of Eye Strain," was read by J. P. McCann, M.D., of Warrensburg. Dr. Owen discussed this paper.

The last paper on the morning program was presented by O. Jason Dixon, M.D., of Kansas City, his subject being "Ear Complications in Measles."

Dr. Beard discussed Dr. Jason's paper, after which the convention adjourned until 1:30 p. m.

Afternoon Session

The Wednesday afternoon session was called to order at 1:30 by Dr. G. W. Robinson, of Kansas City.

Papers were presented as follows:

"A New Operation for the Cure of Spontaneous Nasal Hemorrhage," by Hugh Miller, M.D., of Kansas City.

"Thermophore Treatment of Ocular Neoplasms," by W. E. Shahan, M.D., of St. Louis.

This paper was discussed by Drs. Miller and Ferguson, with Dr. Shahan closing the discussion. "What It Concerns Every Physician to Know About the New More Immediate and Less Painful Method of Curing Chronic Deafness and Discharge from the Ear," was the subject presented by Robert Barclay, M.D., of St. Louis. The paper was discussed by Dr. Miller.

"The Importance of Early Treatment of Epithelioma of the Orbit," with lantern slide demonstrations, was presented by John S. Kimbrough, M.D., of St. Louis.

Dr. Kimbrough's paper was discussed by Drs. Shahan and Coughlin, with Dr. Kimbrough closing the discussion.

"Sarcoma of the Brain with Secondary Actinomyces Simulating Lethargic Encephalitis" was the subject of the paper read by W. A. Clark, M.D., of Jefferson City.

Drs. Fry, Skoog and Gosney participated in the discussion of this paper, with Dr. Clark closing.

"Atypical Toxic Goiter" was the subject of the paper read by A. E. Hertzler, M.D., of Kansas City.

This was discussed by Dr. Fry, with Dr. Hertzler closing the discussion.

"Disturbed Pituitary Function Associated with Sphenoid Sinus Abscess" was presented by F. M. Lowe, M.D. of Kansas City, which was discussed by Dr. Barclay.

"Status Lymphaticus as a Factor in Nose and Throat Surgery," by E. Lee Myers, M.D., of St. Louis, called forth discussion by Dr. Nielson, with Dr. Myers closing.

"Scoliosis" was the paper read by Archer O'Reilly, M.D., of St. Louis, illustrated by lantern slides.

This paper was discussed by Dr. C. B. Francisco, of Kansas City.

"The Carl Berger Operation (Interscapulothoracic)," with report of a case and lantern slides, was presented by F. Reder, M.D., of St. Louis.

This paper was discussed by Drs. Coughlin and Bullock, with Dr. Reder closing.

Adjournment was then taken until Wednesday evening.

(Note: The Wednesday evening meeting was not held as scheduled, so that adjournment Wednesday afternoon in reality was until Thursday morning.)

Thursday, May 26, 1921—Morning Session

The Thursday morning session was called to order at 9:40 by President Ferguson.

The first paper of the morning was presented by Sam H. Snider, M.D., of Kansas City, on "Some Observations on the Early Diagnosis of Pulmonary Tuberculosis."

Dr. Snider's paper was discussed by Drs. Greenberg, Kessler and Seba, with Dr. Snider closing the discussion.

At the request of the president, Dr. A. H. Hamel, of St. Louis, the newly-elected president, then took the chair.

A paper on the subject, "Vomiting in Infants and Babies" was presented by Edwin Henry Schorer, M.D., of Kansas City, and discussed by Drs. Saunders and Zahorsky, with Dr. Schorer closing the discussion.

"Modern Pediatrophics" was the title of the paper read by E. W. Saunders, M.D., of St. Louis, and discussed by Dr. Zahorsky, with Dr. Saunders concluding the discussion.

"A Review of the Literature on Hemorrhagic Diseases of the Newborn" was presented by Dr.

Damon Walthal, of Kansas City. Drs. Saunders, Schorer and Zahorsky discussed it, with Dr. Walthal closing the discussion.

Frank D. Dickson, M.D., of Kansas City, read a paper with the caption, "Epiphysitis of the Upper End of the Femur in Children."

This paper was discussed by Drs. Schauffler, Saunders, Skinner and Coughlin, with Dr. Dickson concluding.

The concluding paper of the morning session was presented by John D. Seba, M.D., on the subject, "Fallacies of the Chiropractic Claims."

This paper was listened to attentively, but owing to the lateness of the hour, it elicited no discussion.

Adjournment was then declared until 1:30 p. m.

Afternoon Session

The final session of the convention was called to order at 1:40 Thursday afternoon by the president, Dr. A. H. Hamel.

Rex L. Diveley, M.D., of St. Joseph, presented the first paper on the program, on the subject "X-Ray Study of Five Hundred Paranasal Sinus Cases."

This was followed by a lantern demonstration by Edward H. Skinner, M.D., of Kansas City, on "Roentgen Analysis of Bone Shadows," which was discussed by Dr. Ravold.

A paper on "Radium Therapy in Uterine Cancer" was given by Clyde O. Donaldson, M.D., of Kansas City, and discussed by Drs. Kimbrough and Skinner.

Edwin C. Ernst, M.D., of St. Louis, read a paper on "Problems in Massive Dose X-Ray Therapy: Newer Methods of Application and Measurement."

Dr. O. H. McCandless, of Kansas City, discussed this paper.

"The Roentgen Rays in Chest Complications" was the subject of the paper presented by E. H. Kessler, M.D., of St. Louis.

The president then said he was sure he voiced the sentiment of those who had listened to the splendid program in expressing appreciation of it.

On motion the meeting adjourned, *sine die*.

REPORT OF COMMITTEE ON HOSPITALS

Missouri contains seventy-seven hospitals of more than twenty-five beds reported in the report of the Council of Medical Education and Hospitals of the American Medical Association and printed in the *Journal of the American Medical Association*, April 16, 1921. It also has six hospitals in six counties with less than twenty-five beds, bringing the total up to eighty-three hospitals in twenty-six counties. There are eighty-nine counties having no reported hospitals. These are not all without hospitals, however, as there are quite a few "one-man organizations," i. e., a few beds in a physician's house that are doing hospital work.

This information has been gathered by your state committee and by the central national committee by correspondence. In gathering this data the state committee has been forced to spend its time without recompense. Stenographer service, postage, carfare and hotel bills when traveling have been paid by the committee personally. County societies have been active in assisting, and hospital boards and superintendents have been most helpful in answering correspondence. While much has been done, the conviction is forced upon us that much more should be done to study the hospital situation in our state. The three great bodies who set standards of excellence and who judge the attainments and classify hospitals are the American Medical Association, the American College of Surgeons, and the

Catholic Hospital Association. The "Minimum Standard" of the College of Surgeons is accepted by all as the general standard. A hospital which has less and does less than this cannot fulfill its duties and obligations to patients, for it is now accepted that all institutions accepting the helpless sick for treatment do have certain responsibilities to these sick persons beyond the money involved. This standard is as follows:

The Minimum Standard of the American College of Surgeons

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word *staff* is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are (a) competent in their respective fields and (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.

3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide:

- (a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)

- (b) That the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery, and obstetrics; the clinical records of patients, free and pay, to be the basis for such review and analyses.

4. That accurate and complete case records be written for all patients and filed in an accessible manner in the hospital, a complete case record being one, except in an emergency, which includes the personal history; the physical examination, with clinical, pathological, and X-ray findings when indicated; the working diagnosis; the treatment, medical and surgical; the medical progress; the condition on discharge with final diagnosis; and, in case of death, the autopsy findings when available.

5. That clinical laboratory facilities be available for the study, diagnoses, and treatment of patients, these facilities to include at least chemical, bacteriological, serological, histological, radiographic, and fluoroscopic service in charge of trained technicians.

The schedule of the American Medical Association is as follows:

Schedule of the American Medical Association

1. The Staff of the Hospital.

1. There must be an organized staff.
2. Staff physicians should be men of unquestionable integrity both professionally and morally.
3. They should be proficient in the special fields in which they work in the hospital.
4. They should give personal attention to the patient under their charge, some member of each department visiting the hospital every day, and every member of the staff should visit the hospital at least once each week.
5. They should assume an obligation to direct and supervise the training of the interns admitted to the staff.

6. (a) A clinical conference of the attending staff and the interns should be organized and held at frequent intervals at least monthly, at which new cases and the problems they present should be discussed. (b) There should also be clinical and pathologic conferences, for the attending staff and interns where the antemortem clinical picture is presented and compared with the necropsy findings. (c) There are also hospital medical societies at which staff members and interns are encouraged to present cases which have been worked up from the clinical point of view and on which they have read up the available literature.

II. *The Equipment of the Hospital.*

- 1. A pathologic department equipped with facilities for necropsies, this work to be in charge of an expert, who may be a member of the staff skilled in such work.
- 2. One or more small clinical laboratories for work by the intern in direct connection with the wards for the routine examination of blood, urine, stools and gastric contents. Within the hospital there should be also a clinical laboratory in charge of an expert who shall be responsible for the more technical, chemical, bacteriologic and serologic work and examinations.
- 3. A roentgen-ray department in charge of an expert roentgenologist and equipped to do roentgenographic, fluoroscopic and therapeutic work.
- 4. A working medical library containing a fair supply of modern standard text and reference books, the better medical journals, and suitable charts and models. Bound volumes of the better medical journals for recent years constitute a very satisfactory part of a hospital medical library.
- 5. Adequate provision for the housing and recreation of interns.

III. *Histories and Records.*

- 1. Complete histories should be taken, giving the patient's complaint, physical examination at time of admission to hospital, laboratory findings, description of operation, if any, daily record of case, condition and date when discharged from the hospital, end-results, and, in case of death, necropsy findings if necropsy is performed.
 - 2. The histories should show, by signatures or initials, the persons writing them or parts of them. This will show not only the work of the intern, but also the supervision over it by members of the attending staff. In hospitals where senior medical students act as clinical clerks, it should be the duty of the interns to supervise and correct the histories written by the students and the records they keep.
 - 3. The records should be carefully kept and placed in charge of a trained historian. This will not only guarantee better records and better care from the patient's point of view, but also will actually protect the hospital itself, especially in certain medical legal cases.
 - 4. The records should include an alphabetical index of the patients, another arranged by diagnoses, and, for surgical cases, one arranged from the standpoint of the regional part involved. For the alphabetical index cards might be used which would show the end-results, sometimes referred to as the "summary" of the case.
- Of these seventy-seven hospitals containing 7,903 beds for sick patients there are sixteen that are approved for intern teaching by the American Medical Association; eighteen that are declared up to standard by the American College of Surgeons. There are seventeen more that have reported that they are approaching the standard. Of the sixteen that are approved for intern teaching, i. e., are A

Grade, seven are in Kansas City, eight are in St. Louis and one in Columbia. These sixteen hospitals contain 3,761 beds. That is, nineteen per cent. of hospitals are A Grade and they contain forty-eight per cent. of all the beds in the state. This places Missouri very high in the list of the states having A Grade hospitals. There are a large number of hospitals that should be placed on the intern teaching basis. The reason they are not on is that in staff work, record keeping, or character and ability of their staff, they are deficient. The number is as follows:

Hospitals That Really Should Be "A" Grade

City	Hospitals	Beds
St. Louis	15	1,852
Kansas City	7	523
St. Joseph	4	397
Springfield	4	315

Sedalia, Carthage, Joplin, Webb City, and Jefferson City all have most excellent hospitals aggregating about five hundred beds, a total of 3,487, or about 43 per cent. of the whole.

Problems:

How shall we hold the forty-eight per cent. to their present high positions, and how shall we bring the remainder to the minimum standard? The answer is: By greater interest in hospital study by the physicians of the state and in a better provision for the work of the state hospital committee. It should have working funds appropriated to it and its members should go as helpful visitors to all hospitals that call for assistance in perfecting their organization. Calls have come to us from many cities and towns asking us to come, meet with them and help them, but we could not individually bear the expense and loss of time.

Problem 2

Railroad hospitals, special hospitals for tuberculosis, obstetrics, eye and ear, cancer, and so forth, should be brought into the teaching class. This can only be done by activity on the part of our members who work in such institutions.

Problem 3

How can we best study the many "One-man organizations"—the small hospitals serving distant communities? These deserve our best care. Their efforts should be encouraged. The laboratories of the state should be at their disposal, and nearby city hospitals should render their helpful assistance.

Problem 4

How can we influence the commercial, privately owned hospitals, that exploit patients? There are a few such. They make it especially hard for the many small private institutions that do most excellent work and are far from commercialism. How can these last be helped and their good work recognized? I do not know. The answer must come from the study by a better state committee with means of study provided either by this Association or by the state. A state hospital commissioner under the state board of health has been suggested. Again I must say I do not know.

In conclusion, I wish to express my deep sense of obligation to my fellow members on this committee, to the secretary of our Society, Dr. Goodwin,

and to many earnest hospital officials who have helped in this work.

HERMAN E. PEARSE, M.D., *Chairman.*
DR. M. B. CLOPTON,
DR. C. H. NEILSON,

Committee.

REPORT OF THE SECRETARY-EDITOR

The work of the secretary's office continues to increase yearly not only in the clerical work of maintaining the membership records but also as a source of information for non-medical bodies the American Medical Association, boards of health and miscellaneous bodies. Letters come to the office from all sorts of persons inquiring about fakes, near fakes, and about reputable practitioners and institutions, so that the volume of correspondence and statistical data are constantly growing. The purposes of the organization have been brought before the people this year in a very positive manner through the protest on the passage of the Chiropractor Bill, the Medical College Bill, and the Hospital Bill, concerning which you will hear more in detail from the Committee on Health and Public Instruction at the legislative meeting tomorrow night.

I want to thank the members for their generous support of the Journal. It is not a despised periodical neither by the advertisers nor the general reader. Nor is it a cemetery where the doleful dirge of the burial service is sung over papers that are printed in its pages. On the contrary it is listed in all standard reference works and finds a place on the shelves of practically every medical library in this country and not a few in other countries; the librarian of one of the largest medical libraries recently requested that two copies be sent to her "because," she said, "yours is referred to so much that one copy won't stand the wear and tear and becomes unfit for binding." I say these things to encourage your continued interest in our Journal for it is not only a source of very considerable income from the advertising pages, but puts the contributions of members in the permanent files of the literature. The advertising income could be very materially increased, but as you know we restrict the advertisements of medical articles to those approved by the Council on Pharmacy and Chemistry of the American Medical Association, and we carefully investigate other concerns before accepting their advertising. For this reason members should make it a point to consult the advertising pages of the Journal when purchasing equipment and supplies.

The number of manuscripts that I now have on hand and to come from this meeting will compel us to enlarge each issue for several months in order to publish all the papers within a reasonable time.

The county society secretaries will hold their thirteenth annual meeting in this room tomorrow afternoon at three o'clock, and members are invited to attend. We all know how much the success of the organization depends upon the work of the county secretaries and to encourage them in their deliberations is a graceful act of appreciation that they will welcome.

All the expenses of the secretary's office are set down in itemized form in double entry bookkeeping and the accounts are audited annually by a certified public accountant. A monthly balance sheet is drawn and all these accounts are on hand for inspection.

It is a pleasure to report that the numerical strength of the Association grows steadily. The paid-up membership of the Association for 1921 is considerably greater at this date than it has been in former years on the date of our Annual Meet-

ing and the total number of members is larger than the total of last year.

MEMBERSHIP

Number of members, March 20, 1920.....	3,430
New members	229
Reinstated	4

3,663

Resigned	20
Transferred	25
Dropped	39
Deceased	40
Expelled	1

Number of members, March 20, 1921.....	3,538
Increase	108

Respectfully submitted,

E. J. GOODWIN,
Secretary-Editor.

REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Your committee attended meetings with the Board of Curators of the State University to discuss the erection of a State Hospital and the completion of medical education at the State University, as outlined in the proposition submitted by Dr. F. G. Nifong of Columbia and adopted by the House of Delegates. The appeal to the Governor and the Legislature as read by Dr. Nifong was sent to the Governor and to the members of the 51st General Assembly which convened in 1921. At the meetings with the Board of Curators your committee promised its support to the Board of Curators in the effort to obtain an appropriation of \$500,000 from the legislature for the erection of a State Hospital at Columbia to be under the direction of the State University. The chairman of your committee attended a hearing of the Appropriations Committee in the General Assembly and urged the appropriation of this sum for the hospital.

As all of you know we met defeat in the 51st General Assembly on the bills we opposed, but several bills that we approved were passed. The chiropractors, the optometrists, the advocates of low-grade medical schools, and the osteopaths desiring to treat patients in all hospitals, succeeded in passing their bills. It is now a matter of history that Governor Hyde vetoed the Chiropractor Bill and the Hospital Bill, but signed the Medical College Bill and the Optometry Bill. The bill reducing the number of years in which suit for malpractice can be brought against physicians and dentists, from five years to two years, passed without much struggle and was signed by the Governor, and the bill to create a central board of control for the eleemosynary institutions passed and was signed by the Governor. You are all familiar with the events following the passage and signing of the Medical College Bill. This bill removes the word "reputable" from the law affecting medical colleges, and the words "legally chartered" were dropped in the amended bill. The only requirement now is that applicants must be graduates of "some medical school of four years' requirements including two years of operative and hospital work before graduation." A new section was added giving the courts the right to treat all questions of dispute between the Board of Health and medical colleges, or the graduates of medical colleges, as new cases, and authority to render decisions as to what action the board should take in each case. According to the ruling of the Attor-

ney-General of the State the board will have no power to inspect, grade, or discipline a medical school and the question of what shall constitute a medical school in good standing can only be decided by the courts.

In the fight against this and other bills your committee attended hearings and visited members of the two branches of the legislature whenever possible to do so, and was assisted by other members of the Association. From time to time members made trips to Jefferson City, and the secretary spent a large part of his time at the capital. The following members responded to requests to go to Jefferson City at various times, some of them making more than one trip: R. M. Funkhouser, A. H. Hamel, Cortez Enloe, Wm. Engelbach, W. A. Clark, G. H. Jones, G. C. Eggers, George Dock, H. E. Pearse, Don Joseph, A. G. Pohlman, C. H. Shutt, R. L. Thompson, L. T. Post, F. E. Woodruff, P. V. Woolley, R. W. Holbrook, W. L. Gist, R. S. Vitt, A. R. McComas, J. F. Harrison, and E. E. Brunner.

In addition to the above, other members went to Jefferson City from time to time, but we did not attempt to keep an accurate record of each individual. The members at Jefferson City were very active and helpful at all times.

Our opposition to the Optometry Bill was definite until the first week in February when it was agreed with the oculists that an amendment to the Optometry Bill should be introduced incorporating the principal features of the Maryland law on Optometry and 20/20 vision as recommended by the Ophthalmology Section of the American Medical Association in 1914. This amendment failed of adoption and the bill passed practically as it was introduced. The fact that Missouri and Texas were the only two states without an optometry law was a strong argument among the legislators for the passage of the bill, in addition to the conditions to be mentioned later.

At the hearing of the Chiropractor Bill a delegation of members met at Jefferson City and outlined the plan of opposition to the bill. The chairman of your committee acted as chairman of the delegation and by vote the delegation chose Drs. W. A. Clark of Jefferson City, George Dock of St. Louis, and Herman E. Pearse of Kansas City, to speak against the bill. Dr. George M. Bristow of Princeton who was a member of the House of Representatives was a very powerful influence for our side of the questions, but unfortunately was not supported at all times by other physician members of the General Assembly.

On March 29 a large delegation of physicians and laymen interested in public health matters had a conference with Governor Hyde on the Medical College Bill, the Chiropractor Bill, and the Hospital Bill, appealing to the Governor to veto all these bills. The Governor finally vetoed the Chiropractor Bill and the Hospital Bill, and signed the Medical College Bill.

One of the big results of this upheaval was the formation of a public health league called the Missouri Public Health League, the purposes of which are to watch legislation, state and civic, affecting the public health, and endeavor to defeat and repeal measures inimical to public health and foster the passage of bills improving health and sanitary conditions of our state.

As soon as Governor Hyde signed the Medical College Bill the St. Louis Medical Society adopted resolutions to invoke the referendum on Senate Bill No. 433 and the movement was endorsed by a number of county societies and numerous members. The Missouri Public Health League undertook the work of distributing the petitions and excellent progress has been made in getting the required num-

ber of names. This question vitally touches public health and medical practice, therefore your committee recommends that the House of Delegates approve and endorse the referendum movement.

There was a very definite attitude of opposition against any measure that seemed to touch the physician or public health matters, including the State Board of Health. The reason for this attitude is difficult to define except in general terms. With a session composed of a very large number who had no previous experience in legislative work, and many of the hold-overs favoring measures which we opposed in the past, we found ourselves in a very awkward position. In spite of all the labor that we expended, which was considerable, the results ran against us as outlined above.

The bills that we opposed and those we favored are listed below.

Bills Opposed by Our Association

CHIROPRACTOR BILL—H. B. No. 113—S. B. No. 171.

Introduced by Mr. Caulfield of St. Louis and Senator Brogan of St. Louis.

A bill defining and regulating the practice of chiropractics. Passed by both houses but vetoed by Governor Hyde.

AMENDING THE MEDICAL PRACTICE ACT—H. B. No. 277.

Introduced by Mr. Stevens of St. Louis County.

A bill requiring all persons desiring to practice medicine, surgery, midwifery, chiropractics, and optometry to obtain a license from the State Board of Health. This bill died in committee.

THE MEDICAL COLLEGE BILL—H. B. No. 288—S. B. No. 433.

Introduced by Mr. Lay of Crawford County and Senator Ralph of St. Louis County.

A bill striking out the word "reputable" as applied to medical colleges and inserting the words "legally chartered." This bill was amended in the house so as to require applicants for examination to be graduates of medical colleges whose standards were equivalent to the standards of the medical colleges in the majority of the states of the Union. No attempt was made to pass it in the House in this amended form. The Senate refused this amendment and also struck out the words "legally chartered" as well as the word "reputable" and added a clause authorizing the courts to review as new cases all questions of grievance between the State Board of Health and medical colleges or graduates applying for a license. In this form it passed both houses and was signed by Governor Hyde.

THE OPTOMETRY BILL—H. B. No. 360—S. B. No. 333.

Introduced by Mr. Manning of St. Louis City and Senator Proctor of Jackson County.

A bill defining and regulating the practice of optometry. Passed both houses and signed by Governor Hyde.

DEPUTY STATE HEALTH COMMISSIONERS—H. B. No. 493.

Introduced by Mr. Myer of Gasconade County.

A bill repealing the law providing for the appointment by the State Board of Health of deputy state health commissioners in each county. The bill died on the calendar principally through the work of Dr. G. C. Eggers.

THE HOSPITAL BILL—S. B. No. 342.

Introduced by Senator Gray of Carthage.

A bill compelling all hospitals exempt from taxation to allow the practitioners of any system of healing recognized as reputable by the State of Missouri to treat patients in the hospitals. This bill would allow osteopaths, chiropractors, optometrists,

and practitioners of all methods of healing legalized by the state, to treat patients in practically every hospital in the state. The bill passed the Senate without amendment, but was amended in the House committee so as to apply only to state, county and municipal institutions and permit consultation with any physician in good standing in any recognized school of medicine. The amendment was acceptable to Senator Gray but the House refused to adopt it and the bill passed both branches of the Assembly. It was vetoed by Governor Hyde.

THE PATENT MEDICINE BILL—H. B. No. 279.

Introduced by Mr. Stevens of St. Louis County. This bill prohibited the sale of practically every form of patent medicine, drugs and medicines except on the prescription of a physician. It was reported unfavorably by the Committee on Public Health and did not pass.

Bills Supported by Our Association

PROPHYLAXIS OF EYES OF NEW-BORN BABIES—H. B. No. 160—S. B. No. 98.

Introduced by Mr. Bestor of Pemiscot County and Senator Gray of Carthage.

A bill requiring the instillation into the eyes of new-born babies of a prophylactic solution approved by the State Board of Health. Passed both houses and signed by Governor Hyde.

PHYSICAL EDUCATION BILL—H. B. No. 115—S. B. No. 424.

Introduced by Mr. Tatum of McDonald County and Senator Collins of Sedalia.

A bill providing for the physical education of school children and the appointment of a state director of physical education. In its original form this would have placed the correction of physical defects and impairments in the hands of the director of physical welfare who would be a layman and repealed the law establishing the Bureau of Child Hygiene. We opposed the measure in that form. Amendments were attached to the bill placing the correction of physical defects and impairments in the hands of the state commissioner of health or the Bureau of Child Hygiene. It passed as amended.

THE MALPRACTICE BILL—H. B. No. 426—S. B. No. 335.

Introduced by Dr. Bristow of Mercer County and Senator Tout of Cass County.

This bill reduces the time in which a suit for malpractice can be brought against physicians, dentists, roentgenologists, nurses, hospitals, and sanitoriums, from five years to two years. The bill passed both houses and was signed by Governor Hyde.

CENTRAL BOARD OF CONTROL—H. B. No. 615—S. B. No. 446.

Introduced by Mr. Hale of New Madrid and Senator Irwin of Jefferson City.

This bill places the four state hospitals, the State Sanatorium, the Colony for Feeble Minded and Epileptic, under the management of a single board composed of six members, three from the political party casting the highest number of votes, and three from the party casting the next highest number of votes at the general elections, and also provides for the appointment by the board of a health supervisor who must be skilled in the science of psychiatry, at a salary of \$7,000 per annum and gives him full control of all the eleemosynary institutions. The bill practically removes the institutions from politics and should make the tenure of superintendents and employees independent of political influence. A bad feature of the bill allows any relative of an inmate of the institutions to "employ a licensed physician or practitioner" to administer treatments to his relative who is an inmate, without cost to the state.

The bill passed both houses and was signed by the Governor.

Respectfully submitted,

R. M. FUNKHOUSER, *Chairman*,
J. FRANK HARRISON,
J. D. BRUMMALL,
H. E. PEARSE,
G. C. EGGERS.

REPORT OF COMMITTEE ON BLINDNESS

Since the last meeting of our Association much has been accomplished. The Missouri Commission for the Blind has a consulting staff of seventy-five oculists throughout the state. This provides services for the needy individuals in any part of the state suffering from diseases of the eye. In St. Louis their activities have been more effective, but it is only a question of a short time until all parts of the state will be thoroughly organized and in position to handle all cases.

The United States Public Health Service, in cooperation with the Missouri State Board of Health and the Missouri Commission for the Blind, has made surveys in several counties in southeast Missouri. Mr. Raynor of Kentucky made this survey. His report showed conditions so grave that Dr. McMullen, chief of the field work against trachoma, visited St. Louis and Cape Girardeau, holding clinics and giving public health addresses. Quite a great deal of good resulted from this active campaign of the United States Public Health Service. Dr. McMullen won his spurs as head of the trachoma service by his work in the mountains of eastern Kentucky and Tennessee where trachoma was looked upon as a hereditary disease. The work of the Public Health Service must be followed up if we wish to save our state great financial loss as well as individual suffering.

The recent constitutional amendment which passed last fall in our general election allows a pension of \$15 to \$25 a month to the needy blind, and unless we follow up an active campaign against trachoma and proper prophylaxis of the new-born, we will add to our already over-burdened taxation.

The last legislature passed a law requiring the use of a proper prophylactic approved by the state board of health.

The Red Cross, through the medical director of the Southwestern Division, is instructing Red Cross nurses to aid in sending prompt reports of cases of ocular disease.

The National Committee for the Prevention of Blindness has succeeded in establishing courses for the training of workers with the blind and those with defective vision, and courses in prophylactic measures at Harvard University and at the University of Pennsylvania. The National Committee is also sending to the different states a motion picture entitled "Saving the Eyes of the Youth." The Worcester Film Company of New York will give all particulars as regards rental, etc.

The industrial situation as regards lighting in relation to health and safety should be considered in our next legislative program, as well as revising our new optometry law to conform to the standards of the Maryland law which at this time appears to be a model law.

Respectfully submitted,

EMMETT P. NORTH, *Chairman*.

REPORT OF THE DEFENSE COMMITTEE

The Defense Committee respectfully submits the following report: In April, 1920, there were nineteen malpractice suits and threats on file. Three

of these cases have since been disposed of, one with a verdict for the defendant and two were settled out of court, leaving sixteen old cases still on file.

Since April, 1920, there have been eighteen new suits and threats filed. Five of these have been settled in the following manner: two returned verdicts for the defendant; one gave a judgment of one dollar to the plaintiff; two cases were dismissed by the court. Thirteen new cases are still on file, making a total of twenty-nine cases still pending.

It is difficult to keep accurate record of the termination of all suits and threats because of the fact that the committee is not always notified of such termination. This point we would like to urge upon the members.

Unfortunately, some of our members have found themselves in the embarrassing position of being sued and, because they were in arrears with their dues, have been deprived of the financial aid of the Association. The committee has no discretion on this point, as it is specifically covered by the by-laws.

The Defense Committee wishes to thank the councilors and the members of the Association for their willing co-operation and response to the committee's requests.

RUDOLPH S. VITT,
ROBERT F. SCHLUETER,
CHAS. E. HYNDMAN, *Chairman.*

REPORT OF THE PUBLICATION COMMITTEE

During the fiscal year from January 1, 1920, to December 31, 1920, we have issued twelve numbers of the Journal. We are now in the 18th volume, having started the Journal in 1904. During 1920 we published 79 original articles and 79 editorials, many reports of society proceedings, numerous articles on miscellaneous topics, a large number of book reviews, comments on new books not strictly medical but holding special interest for physicians, notices of deaths of members with comments on their lives and work whenever this information was available, and articles on remedies approved by the Council on Pharmacy and Chemistry of the American Medical Association, as well as considerable data in the propaganda for reform in medicine. All books received for review are distributed to the medical libraries who undertake to furnish reviews of the books. A comprehensive index appears in the December number. The volume contains 526 pages of reading matter which is an average of 44 pages in each issue.

The advertising department of the Journal is carefully scanned by the committee and none but approved articles of a medicinal nature are accepted. We have refused several pages of advertising matter because they were not approved. This restriction on our advertising department necessarily limits the field from which we can draw advertisements and therefore limits the income from advertising. A report on the expenses and the income of the Journal is made by the Council.

Respectfully submitted,

W. H. BREUER, *Chairman.*
SCOTT P. CHILD,
M. A. BLISS.

REPORT OF THE TREASURER
General Fund

April 6, 1920, to May 14, 1921

Receipts

Balance on hand Mar. 31, 1920.\$ 6,064.77
Advertising 6,044.39

Left Over from Exhibits.....\$ 100.00
Assessments from County Societies 11,722.00
Interest on Daily Balance..... 75.25 \$24,006.41

Disbursements

Transferred to Sinking Fund..\$ 1,000.00
Transferred to Defense Fund.. 1,000.00
Annual Meeting 315.71
Printing Journal 6,596.32
Salaries 6,287.50
Rent 585.00
Secretary for Incidental Expenses 1,950.00
Committees 200.98
General Expense 865.51
Refund to County Societies.... 3.00
Office Equipment 331.05
Telephone 576.26
Treasurer Allowance 200.00

Total\$19,911.33
Balance May 14, 1921..... 4,095.08

\$24,006.41

Defense Fund

Receipts

Balance March 31, 1920.....\$ 2,382.33
Transferred from General Fund 1,000.00
Interest on Daily Balance..... 101.25 \$ 3,483.58

Disbursements

D. F. Hockdoerfer.....\$ 100.00
E. H. Skinner..... 100.00
S. W. Tickle..... 100.00
P. E. Coil..... 100.00
A. R. Kieffer..... 35.00 \$ 435.00

Balance \$ 3,048.58

Sinking Fund

Balance March 31, 1920.....\$ 6,003.38
Transferred from General Fund 1,000.00
Interest on Daily Balance..... 233.00 \$ 7,236.38

SUMMARY OF CASH BALANCE MAY 14, 1921

General Fund\$ 4,095.08
Defense Fund 3,048.58
Sinking Fund 7,236.38

Grand Total\$14,380.04

MEMBERS REGISTERED AT THE SIXTY-FOURTH ANNUAL MEETING

St. Joseph, May 24, 25, 26, 1921

Allaman, J. M., St. Joseph.
Allen, Chas. E., Kansas City.
Allen, C. H., Odessa.
Allen, C. L., Cosby.
*Allen, Lewis G., Kansas City, Kan.
Allison, Nathaniel, St. Louis.
Ambrose, E. C., St. Joseph.
*Aschman, T. H., Kansas City.
Atkins, Calvin, Independence.
Austin, M. B., Brunswick.
Bagby, B. H., Centertown.

*Visitor.

- Ballard, E. S., St. Joseph.
 Barclay, Robert, St. Louis.
 Barger, J. Nelson, Albany.
 Barnhart, Don A., Huntsville.
 Bauman, L. C., St. Joseph.
 Baumgarten, Walter, St. Louis.
 Baysinger, S. L., Rolla.
 Beard, F. G., St. Joseph.
 Beaty, J. G., Clinton.
 Beatie, Wm. R., Springfield.
 Beck, Leroi, St. Joseph.
 Beers, E. G., Trimble.
 Bell, Charles T., Maryville.
 *Bell, James R., Fairfield, Neb.
 Bell, John M., St. Joseph.
 Bellows, G. E., Kansas City.
 Belshe, G. W., Trenton.
 Benham, Chas. E., Tarkio.
 Berrey, Robt. W., Mexico.
 *Bock, Jacob, Omaha, Neb.
 Boteler, Geo. W., St. Joseph.
 Biggs, M. O., Fulton.
 Binnie, John F., Kansas City.
 Blair, Edw. G., Kansas City.
 Bliss, Malcolm A., St. Louis.
 Bode, Louis F., St. Joseph.
 Bolton, John W., Warrensburg.
 Bourn, John J., Hannibal.
 Braecklein, Wm. A., Higginsville.
 Branson, C. S., St. Joseph.
 Breuer, Wm. H., St. James.
 Brickey, P. A., Boonville.
 Bristow, A. S., Princeton.
 Brown, John M., Maysville.
 Brown, Tinsley, Hamilton.
 Brummall, J. D., Salisbury.
 Brunner, E. E., Carrollton.
 Bullock, Eugene H., Kansas City.
 Bullock, Frank E., Forest City.
 Eurgher, A. E., St. Joseph.
 Burke, John P., California.
 Burrill, Chas. W., Kansas City.
 Byrne, John L., St. Joseph.
 Callaway, L. H., Nevada.
 Calvert, L. C., Weston.
 Campbell, A. J., Sedalia.
 Campbell, Watson, Kansas City.
 Capell, C. S., Kansas City.
 Carle, H. W., St. Joseph.
 Chaffin, W. F., Raymore.
 Chambers, J. Q., Kansas City.
 Chandler, John F., Oregon.
 Chastain, Chas. H., Weston.
 Child, Scott P., Kansas City.
 Clapp, C. B., Moberly.
 Clark, A. Benson, Joplin.
 Clark, E. R., Columbia.
 Clark, H. J., Excelsior Springs.
 Clark, H. M., Platte City.
 Clark, Wm. A., Jefferson City.
 Clark, Wm. J., Maysville.
 Clayton, Paul B., Kansas City.
 Clendening, Logan, Kansas City.
 Clint, M. L., Meadville.
 Clopton, M. B., St. Louis.
 Coats, C. C., St. Joseph.
 Conley, Dudley S., Columbia.
 Conrad, H. S., St. Joseph.
 Conover, C. C., Kansas City.
 Cook, E. F., St. Joseph.
 Cook, F. L., Independence.
 Cook, R. F., Carrollton.
 Cook, T. B., Rayville.
 Cotton, T. W., Van Buren.
 Coughlin, W. T., St. Louis.
 Crabtree, R. E., Butler.
 Craig, T. B. M., Nevada.
 Craven, Y. D., Excelsior Springs.
 Crowson, Egbert, Parnell.
 Crawford, H. S., Harrisonville.
 Crockett, Jas. A., Stanberry.
 Crowson, E. L., Pickering.
 Cuppaidge, G. O., Moberly.
 Davis, A. W., Kansas City.
 Davis, J. C. B., Willow Springs.
 Davis, John M., Craig.
 Day, Hiram, Parnell.
 Dean, L. E., Maryville.
 Deatherage, Wm. N., Galena.
 DeLameter, Hasbrook, St. Joseph.
 *DeLong, S. W., Tingley, Ia.
 DeVilbiss, E. F., Kansas City.
 Dickson, Frank D., Kansas City.
 Dinwiddie, T. H., Higbee.
 Diveley, Rex L., St. Joseph.
 Dixon, O. Jason, Kansas City.
 Dock, George, St. Louis.
 Donaldson, Clyde, Kansas City.
 Doolin, L. R., Gallatin.
 Dorsett, E. Lee, St. Louis.
 Dowell, Geo. S., Braymer.
 Dowell, H. S., Maryville.
 Downing, T. J., New London.
 Doyle, John M., St. Joseph.
 Droll, Geo. A., Kansas City.
 *Duncan, R. E., Kansas City.
 Dunham, J. D., Pattonsburg.
 Dunkeson, E. B., Grant City.
 Dunsmore, J. M., St. Joseph.
 Durham, S. L., Dearborn.
 Earnest, C. E., Kansas City.
 Eggers, G. C., Clayton.
 Elam, Wm. T., St. Joseph.
 Engelbach, Wm., St. Louis.
 Enloe, Cortez, Jefferson City.
 Ernst, Edwin C., St. Louis.
 Eubank, A. E., Kansas City.
 Evans, C. L., Oregon.
 Farber, M. J., St. Joseph.
 Fassett, Chas. Wood, Kansas City.
 Ferguson, L. J., St. Joseph.
 Ferguson, Wm. J., Sedalia.
 Fleming, Thos. S., Moberly.
 Forgrave, H. S., St. Joseph.
 Forgrave, L. Robt., St. Joseph.
 Forgrave, Paul, St. Joseph.
 Forsen, J. S., Greybull, Wyo.
 Francisco, C. B., Kansas City.
 Fredericks, Edw. L., Kansas City.
 Frick, Wm. J., Kansas City.
 Frischer, Julius, Kansas City.
 Fry, Frank R., St. Louis.
 Fryer, C. P., Maitland.
 Fulkerson, P. P., St. Joseph.
 Funkhouser, Robt. M., St. Louis.
 Furnish, J. A., Shelby.
 Fuson, L. H., St. Joseph.
 Gaines, J. J., Excelsior Springs.
 Garner, R. L., Milan.
 Gartside, J. E., Kingston.
 Gayler, W. C., St. Louis.
 Gebhart, O. C., St. Joseph.
 Geiger, Chas. G., St. Joseph.
 Geiger, Jacob, St. Joseph.
 *Gilleson, C. P., Warrensburg.
 Gillham, Frank W., Jefferson City.
 Gilliland, A. O., Cameron.
 Gillmor, Wm. L., Mt. Washington.
 Gleaves, O. G., St. Joseph.
 Glynn, Robert, Springfield.

*Visitor.

*Visitor.

- Good, Clarence A., St. Joseph.
 Goodson, Wm. H., Liberty.
 Goodwin, E. J., St. Louis.
 Gosney, C. W., Kansas City.
 Grace, H. M., Chillicothe.
 Gray, A. L., St. Joseph.
 Gray, Henry, Prairie Hill.
 Greenberg, Chas., St. Joseph.
 Greene, J. W., Independence.
 *Gregory, W. S., St. Joseph.
 Griffin, Fred, Mexico.
 Gummig, Edw. A., St. Joseph.
 Haire, Robt. D., Clinton.
 Hale, Joseph M., Dearborn.
 Haley, Roy R., Brookfield.
 Hall, C. Lester, Kansas City.
 *Hall, Chas. W., Burdick, Kan.
 Hall, E. P., Kansas City.
 Hall, O. B., Warrensburg.
 *Ham, W. E., Beattie, Kan.
 Hamel, A. H., St. Louis.
 Hamilton, B. G., Kansas City.
 Hamilton, Robt. L., Richmond.
 Hampton, Joseph R., Clinton, R. D. No. 1.
 Haning, M. L., Humphreys.
 Hanna, M. A., Kansas City.
 Hansen, W. J., St. Joseph.
 Harned, Will J., Bethany.
 *Hassig, J. F., Kansas City, Kan.
 Harris, Edgar S., Independence.
 Harrison, J. F., Mexico.
 Hawkins, G. W., Salisbury.
 Hays, B. W., Jackson.
 Henderson, James P., Kansas City.
 Herndon, A. S., Camden Point.
 Hertzler, Arthur E., Kansas City.
 Heryford, J. R., Highland, Kans.
 *Hibbard, S. N., Sabetha, Kan.
 Hickok, H. S., Kansas City.
 Hill, Howard, Kansas City.
 Hill, James A., Jefferson City.
 Hindman, Wm. M., Burlington Junction.
 Hogan, Frank E., Mound City.
 Holbrook, Ralph W., Kansas City.
 Holbrook, Walter F., Kansas City.
 Holdenried, Wm. E., St. Louis.
 Holley, A. E., St. Joseph.
 Hornback, J. T., Nevada.
 Hartigan, F. X., St. Joseph.
 Hull, E. R., Camden Point.
 Hull, W. S., Faucett.
 Hunt, Claude J., Canadian, Texas.
 Hunt, Wm. J., St. Joseph.
 Hunter, James A., Fairfax.
 *Hurt, Lee, Climax Springs.
 Irland, Robt. D., Kansas City.
 Isbell, John, Washington.
 James, Luther S., Blackburn.
 James, W. J., Excelsior Springs.
 Janes, Vincil B., Cameron.
 Johnson, Wm. E., Warrensburg.
 Jolley, J. Frank, Mexico.
 Jones, A. B., Kansas City.
 Jones, Geo. H., St. Louis.
 *Judge, J. T., St. Louis.
 Kavanaugh, J. W., New Hampton.
 Kearby, H. D., St. Joseph.
 Keith, W. E., Kansas City.
 Keller, J. H., Lancaster.
 Kenney, Wm. L., St. Joseph.
 Kerr, U. F., Springfield.
 Kessler, E. B., St. Joseph.
 Kessler, E. H., St. Louis.
 Kimbrough, J. S., St. Louis.
 Kimsey, John T., Lathrop.
 Kinard, K. W., Kansas City.
 Kirchner, W. C. G., St. Louis.
 Knott, Minerva M., Jefferson City.
 Koch, Otto W., Clayton.
 *Kowertz, Geo., Kansas City.
 Kuhn, H. P., Kansas City.
 Kyner, Thos. A., Kansas City.
 Kerr, H. L., Crane.
 Lau, Gustav A., St. Joseph.
 Lawson, Sidney, St. Joseph.
 Leonard, P. I., St. Joseph.
 Lichtenberg, Joseph S., Kansas City.
 Link, J. J., St. Louis.
 Liston, E. H., Walker.
 Loeb, Hanau W., St. Louis.
 Lockwood, T. F., Butler.
 Long, L. S., St. Joseph.
 Lorie, A. J., Kansas City.
 Lowe, F. M., Kansas City.
 Luten, J. B., Caruthersville.
 Lyter, J. C., St. Louis.
 McAlester, A. W., Columbia.
 McAlester, A. W., Jr., Kansas City.
 McCandless, O. H., Kansas City.
 McCann, J. P., Warrensburg.
 McClanahan, John M., Guilford.
 McComas, A. R., Sturgeon.
 McCormick, F. L., Moberly.
 McCracken, S. R., Excelsior Springs.
 McDermott, I. L., Kansas City.
 McDonald, Chett, Kansas City.
 McGaughey, H. D., Joplin.
 McGill, Wm. J., St. Joseph.
 McGuire, C. A., Kansas City.
 McHaffie, Chas. H., Ash Grove.
 McKay, H. S., St. Louis.
 McMichael, Austin, Rockport.
 McMurtrey, A. T., Salem.
 McPherson, O. P., Kansas City.
 Manning, J. C., Skidmore.
 Martin, Clarence, St. Louis.
 Martin, Henry L., Kansas City.
 Martin, Wm. T., Albany.
 Matthews, F. H., Liberty.
 Maxwell, H. S., Hopkins.
 *May, James W., Kansas City, Kan.
 Mays, J. W., St. Joseph.
 Meade, R. H., Kansas City.
 Melunev, S. E., Agency.
 Mendell, E. A., St. Joseph.
 Meyers, E. Lee, St. Louis.
 Middleton, James, Kansas City.
 Miles, Bruce E., Fillmore.
 Miller, Abram, Kansas City.
 Miller, Edwin L., Kansas City.
 Miller, Hugh, Kansas City.
 Miller, Robt. M., Belton.
 Mills, R. F., Odessa.
 Minor, James C., Kansas City.
 Minton, N. H., St. Joseph.
 Montgomery, James G., Kansas City.
 Montgomery, John S., Milan.
 Mook, Wm. H., St. Louis.
 Moore, J. G., Mexico.
 Moore, Neil S., St. Louis.
 Moore, T. E., Trenton.
 Morfit, John C., St. Louis.
 Morton, Daniel, St. Joseph.
 Mosher, Geo. C., Kansas City.
 Mundy, H. F., St. Joseph.
 Murphy, Franklin E., Kansas City.
 Murray, Samuel A., Holden.
 Myers, I. L., Kansas City.
 Myers, W. C., Savannah.
 *Nail, F. E., Riverton, Neb.

*Visitor.

*Visitor.

- Neal, James P., Kansas City.
 Neeley, James E., Elmo.
 Neilson, Chas. H., St. Louis.
 Nichols, Geo. M., Higbee.
 *Nielsen, W. M., Maryville.
 Nifong, Frank G., Columbia.
 Norman, Robt. M., Ava.
 North, Emmett P., St. Louis.
 Northrup, L. C., Platte City.
 Noves, Guy L., Columbia.
 O'Dell, T. T., Marionville.
 O'Reilly, James Archer, St. Louis.
 Orr, Thomas G., Kansas City.
 Osborn, J. F., Corning.
 Owens, James F., St. Joseph.
 Owens, Michael J., Kansas City.
 Owen, Wm. W., Novelty.
 Ozias, Chas. O., Kansas City.
 Packwood, S. D., St. Joseph.
 Parker, James H., Steelville.
 Parrish, E. E., Memphis.
 Parrish, I. N., Cowgill.
 Patrick, P. L., Marceline.
 Paul, T. M., St. Joseph.
 Pearce, Herman E., Kansas City.
 Pendleton, G. F., Kansas City.
 Pentz, Wm. E., St. Joseph.
 Peters, M. L., Cameron.
 Pettijohn, Abra C., St. Joseph.
 *Phelps, J. Q., Maysville.
 Phipps, J. K., Grant City.
 Pickett, C. P., Jefferson City.
 Pitzman, Marsh, St. Louis.
 *Pohlman, A. G., St. Louis.
 Poorman, Bert A., Kansas City.
 Potter, Caryl, St. Joseph.
 Price, Robt. P., Triplett.
 Proud, Willard C., St. Joseph.
 Putman, Ola, Marceline.
 Quigley, B. T., St. Joseph.
 *Quinly, Ralph R., Kansas City.
 Ravold, H. J., St. Joseph.
 Rea, Robt. W., Plattsburg.
 Reder, Francis, St. Louis.
 Redman, Spence, Platte City.
 Redmond, Thos. J., St. Joseph.
 Reed, Wm. M., Kansas City.
 Reid, H. L., Charleston.
 Renaud, E. C., St. Joseph.
 Rhodes, E. L., Warsaw.
 Ridge, Frank I., Kansas City.
 Riley, Fred P., Clyde.
 Rising, Dean S., Kansas City.
 Robichaux, E. C., Excelsior Springs.
 Robinson, Ernest F., Kansas City.
 Robinson, G. Wilse, Kansas City.
 Robinson, John L., Kansas City.
 Robison, W. A., St. Joseph.
 Roundy, Collis I., St. Joseph.
 Rowlett, Hugh S., Maryville.
 Ruhl, J. E., St. Joseph.
 Russell, C. W., Springfield.
 Russell, Edwin L., Kansas City.
 Russell, R. L., Jefferson City.
 Ryland, C. T., Lexington.
 Safford, W. G., Tarkio.
 Sampson, John H., St. Joseph.
 Sanders, Frank L., Kansas City.
 Saunders, E. W., St. Louis.
 Saunders, L. E., Stewartville.
 Schaufler, Robt. M., Kansas City.
 Schisler, E. J., St. Louis.
 Schlueter, Robt. E., St. Louis.
 Schofield, L. J., Warrensburg.
 Schorer, Edwin H., Kansas City.
 Seba, John D., Bland.
 Sec, S. D., Eagleville.
 Sellers, Lyle M., Kansas City.
 Senor, Samuel D., St. Joseph.
 Shahan, Wm. E., St. Louis.
 Sheley, O. C., Independence.
 *Sherman, G. L., King City.
 Shy, M. P., Sedalia.
 *Shores, E. M., St. Joseph.
 Skinner, Edw. H., Kansas City.
 *Simpson, M. B., Kansas City.
 Skoog, Andrew L., Kansas City.
 Smith, Clinton K., Kansas City.
 Smith, Elsworth S., St. Louis.
 *Smith, J. F., St. Joseph.
 Snider, Sam H., Kansas City.
 Spencer, Floyd H., St. Joseph.
 Spivy, Raymond M., St. Louis.
 Standley, Joseph P., St. Joseph.
 *Stanley, H. M., Creston, Ia.
 Steckman, P. M., Plattsburg.
 Stevenson, George R., St. Joseph.
 *Stoltz, Robert S., Kansas City.
 Stuart, Francis I., Independence.
 Suddarth, Chas. H., Excelsior Springs.
 Simmons, B. B., St. Joseph.
 Swanson, J. T., Kansas City.
 Swope, Opie W., Kansas City.
 Tadlock, Baxter W., St. Joseph.
 *Terry, R. J., St. Louis.
 Titterington, M. B., St. Louis.
 Thompson, W. G., Warrensburg.
 *Townsend, Milton B., Kansas City.
 Tupper, Paul Y., St. Louis.
 Thomas, C. E., St. Joseph.
 Taylor, E. P., Fairfax.
 Thomas, C. O., Worthington.
 Thompson, Geo. R., St. Joseph.
 Thornton, J. E., Columbia.
 Timmerman, A. R., St. Joseph.
 Titsworth, Guy, Sedalia.
 Toothaker, B. W., St. Joseph.
 Vandivert, A. H., Bethany.
 Vandivert, W. W., Bethany.
 *Van Noy, H. E., Linwood, Kan.
 Vanorden, H. F., Kansas City.
 Varner, A. O., Union Star.
 Vitt, R. S., St. Louis.
 Vogt, Wm. H., St. Louis.
 Vores, C. P., Unionville.
 Walker, G. S., Harwood.
 Wallace, Chas. H., St. Joseph.
 Walthal, Damon, Kansas City.
 Waterman, J. A., Breckenridge.
 Waugh, C. M., Tarkio.
 Welch, J. Franklin, Salisbury.
 Wentker, B. P., St. Charles.
 Werner, Chas. H., St. Joseph.
 West, Wm. M., Monett.
 Wetzel, N. M., Jamcson.
 Whiteley, G. W., Albany.
 Whitsell, John C., St. Joseph.
 Widner, A. W., Newton.
 Wilhelm, F. E., Kansas City.
 Wilkes, B. A., St. Louis.
 *Willcox, C. M. C., Kirksville.
 Williams, P. E., St. Joseph.
 Williams, Rex, Kansas City.
 Wills, Wm. J., Springfield.
 Winningham, Wm. H., Trenton.
 Wisser, J. J., St. Joseph.
 Wood, N. P., Independence.
 Wood, W. S., Oregon.
 Woods, R. A., Clark.
 Woodson, C. R., St. Joseph.

*Visitor.

*Visitor.

Woolley, Paul V., Kansas City.
 Woolsey, Ross A., St. Louis.
 Wright, Gordon D., St. Joseph.
 Wright, James B., Trenton.
 Yazel, H. E., Kansas City.
 Yeater, H. P., Maysville.
 Young, H. McClure, St. Louis.
 Zahorsky, John, St. Louis.

Total, 478.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-Seventh Meeting, Monday, March 14, 1921

1. PRESENTATION OF CASES.

A. PRESENTATION OF A CASE OF CARDIOLYSIS FOR CHRONIC ADHESIVE MEDIASTINO-PERICARDITIS, FOURTEEN MONTHS AFTER OPERATION.—By DR. ELSWORTH S. SMITH.

A. T. D., 41 years. Female.

F. H. Father died aged 60 years, of Bright's disease. Mother has bronchial asthma. No lues or T. B. in family.

P. H. Measles in childhood; attack of intermittent fever at 10 years. No tonsillitis nor chorea. Rheumatic fever in 1897 followed by severe cardiac decompensation in 1898 as a result of double mitral lesion. Compensation restored by Nauheim baths, and able to work in book binding factory for 15 years afterwards. No alcoholism.

P. T. Developed suddenly March 23, 1913. While walking home fast from work on a windy day was suddenly seized with such severe dyspnea as to force her to stop for breath several times; able, however, to return to work in a few days, but the following July was forced to give up work again, and from this date her disability has been constant and complete.

July, 1914. Abdominal swelling appeared without edema of feet. Paracentesis first done July, 1914, when three gallons were removed at two sittings. Tapping required thereafter at gradually decreasing intervals until, during three years just before coming under our observation, the procedure was called for every five or six weeks.

Ever since onset of trouble seven years ago had been unable to sleep unless propped up in sitting position.

Talma operation in 1898, but no hepatic cirrhosis found and peritoneum described as normal; nothing suggestive of tuberculous peritonitis.

Came under observation at Barnes Hospital February, 1919, when general nutrition was found good, abdomen greatly distended with fluid, lips and nails deeply cyanotic, marked dyspnea even at complete rest, forced to be propped in bed in sitting position.

O. C. D. 5th I. C. S. 4.5 cm. R., 15 cm. L. Mitral stenotic and regurgitation murmurs; systolic retraction at apex. Fixation of cardiac dullness; modified Broadbent present. After removal of 6,350 cc., liver palpable but not nodular. Blood normal.

Urine, trace albumen and a few casts. Wassermann negative to all antigens; complement fixation for tuberculosis negative.

B. P. 130/90. P. deficit 28 to 30. Electrocardiogram showed auricular fibrillation. Inoculation of guinea pig with ascitic fluid proved later negative.

Differential diagnosis. Laennec's cirrhosis ex-

cluded by absence of etiological factors, as alcohol, condiments, etc., absence of progressive loss of weight and strength during seven years and the report of Talma operation; T. B. peritonitis from peritoneum being found normal at operation, and by absence of emaciation and long course of disease, and inoculation into lower animal, but as fluoroscopic examination showed no evidence of adhesive pericarditis, operation was not then done. Given a massive dose of digitalis without any definite result. Patient then returned home with instructions to continue digitalis in 10 drop doses three times a day. She, however, slowly but steadily grew worse, returning on December 6, 1919, when we were able for the first time to obtain definite evidence of pericardial adhesions in seeing fluoroscopically a distinct tugging upward of diaphragm with each cardiac systole (a sign not found in the literature). Operation January 16, 1920, by Dr. H. G. Mudd—resection under local block anesthesia, without pain or shock, of third, fourth and fifth ribs from left border of sternum as far as extension of cardiac pulsation to the left. Distinct extensive pulling-in of soft parts with each systole after rib resection. Influenzal pneumonia, convalescence setting in January 29, 1920. Since this time improvement remarkable. Pthalein increased from 38 per cent. December 6, 1919 to 52.8 per cent. March 20, 1920.

PARACENTESIS

12/30/19—4,750 c.c.;	
1/10/20—2,500 c.c.;	OPERATION 1/16/20
3/16/20—5,250 c.c.;	8 weeks after operation.
4/11/20—6,500 c.c.;	11 weeks after operation.
7/ 7/20—2,100 c.c.;	23 weeks after operation.
3/ 4/21—6,240 c.c.;	59 weeks after operation.

Only four tapings therefore since the operation—a period of nearly one and one-fourth years.

Behavior towards massive doses of digitalis before operation only sufficient response to reduce pulse deficit and rate through influence on vagus; rate lessened and thereby impulses through His bundle reduced to those sufficiently strong to register a greater number of beats at wrist, but not sufficient to produce diuresis and clinical improvement in cardiac decompensation; after operation all these results were obtained. X-ray plates show heart has assumed a position lower in chest cavity, while dimensions of organ have all been reduced, speaking for effect of attachments having been loosened. Present condition: can now sleep flat in bed comfortably and walk about at a moderate pace without dyspnea.

DISCUSSION

Dr. Opie: I would like to ask Dr. Smith if there was evidence of cirrhosis of the liver in this patient.

Dr. Smith: I think there has been a marked reduction of the size of the liver since the operation. The ascites was not due to Laennec's cirrhosis as it is definitely understood that it is primarily cardiac in this symptom complex.

B. ANEURYSM OF THE HEART.—By DR. ELSWORTH S. SMITH.

R. V. Male, white, age 42.

C. C. Shortness of breath and pain in precordium.

P. H. Strénuous sportsman and worker. Repeated attacks of tonsillitis. Acute mastoiditis at 16. Chronic appendicitis with appendectomy at 30.

P. I. Four and one-half months; last May before entrance had sudden attack of dyspnea palpitation, and terrible precordial pain radiating down left arm. Temperature 101.6, respiration 62 between 30 and 40 for a week after. Pulse 116.

Went to hospital for three and one-half weeks. Improved; same symptoms recurred on resuming work though he kept very quiet.

Physical Examination.—Ragged tonsils. P. M. I. in fourth intercostal space in mammary line. Palpable 15 one-half cm. out in fourth intercostal space. Same strength and position sitting or lying. Apical and basal systolic murmurs. Sound good quality.

Laboratory Findings.—Electrocardiograms right ventricle preponderance. Exercise tolerance tests gave marked dyspnea in more strenuous tests, but not much tachycardia.

X-ray plates and fluoroscopic of heart showed a band from the apex to the lateral chest wall in the mammary line attached evidently to the fourth rib, as seen in lateral shift plate. Very little cardiac excursion shown by plates taken in full inspiration and expiration. Spasmodic jerk on diaphragm (?). On one fluoroscopic examination local bulging of heart shadow over perhaps 3 cm. corresponds to insertion of above band-like shadow as though local traction exerted on ventricle by such.

X-Ray Diagnosis.—Cardiac aneurism (?), cardiac hypertrophy, adhesive pleuro-pericardial-cardiac adhesion.

Urine negative.

Blood.—Persistent leukocytosis around 12,000. Red blood cells 4,080,000; hemoglobin 92 per cent.; differential normal; Wassermann negative. Tbc. complement fixation negative; blood culture negative; temperature, pulse and respiration normal on entrance.

Course in Hospital and Treatment.—Several attacks of angina and dyspnea during first two weeks in hospital when heart rate would go up to 100. Nitroglycerine failed to relieve.

Pain in rectum, worse on defecation, first two weeks due to small fissure in ano. Relieved by opium and belladonna suppositories.

Developed broncho-pneumonia at end of second week from which he recovered in two weeks.

Tooth extracted, culture streptococci, staphylococci and diphtheroids.

Patient's condition generally improved though still remained very dyspneic on much exertion and when he first woke up in the morning.

After six months in hospital artificial pneumothorax was induced on left side after which fluoroscopic examination confirmed previous findings. Ten c.c. of turbid yellow fluid obtained on one of these punctures; 30,000 cell per cu. mm. Poly. 51 per cent. L. 19.8 per cent. Endothelial cells 5.8 per cent., eosin 7.6 per cent., unclassified 5.1 per cent., basoph. 0.5 per cent., vacuolated cells 8.2 per cent. Cultures negative. Guinea pig died of *B. septicemicus* pathogenic for guinea pig only.

Physical Examination.—Six months after entrance shows C. B. D. percussable the same as in the X-ray with the axis of the heart more horizontal than normal, the apex impulse still in the fourth intercostal space, and 15.5 cm. from the mid sternal line as on entrance. Broadbent's sign present. Dullness, diminished B. S. and T. F. in lower left axilla. Feeling fine. Cardiolytic was now planned but delayed on account of bromide rash over field of operation. Cleared up under Shuttle's mixture and warm baths.

Six months and one day after entrance patient was visiting friend's house for dinner. Suddenly complained of pain in epigastrium and closeness of air. Vomited and went into collapse on way to hospital. Died as he reached his room. Caffeine sod. benz. intramuscularly and adrenalin intracardial failed to revive.

Clinical Diagnosis.—Adhesive pericarditis (pericardiac pleural adhesion fourth rib adhesion), traction aneurism (?) (L. ventricle), angina pectoris,

encysted pleural exudate (chronic inflammation in region of cardiac apex), hypertrophy of heart.

Anatomical Diagnosis.—Adhesion to fourth rib from precardium to parietal pleura, viscero-parietal pericardial adhesions, pericardial effusion, C. P. C. of liver and spleen, aneurism of left ventricle, occlusion of descending branch of left coronary—old fibrous hypertrophy of heart.

DISCUSSION

Dr. Singer: In a large number of cases in the tuberculosis clinic we see cases of heart murmurs that do not fit in with the general picture of heart lesions of mitral stenosis. The X-ray plate and the fluoroscope show definite displacement of the heart in some cases of apical pneumothorax; it is apparent that some of these murmurs are due to pressure.

C. CASE OF TYPHOID MALARIA.—By DR. A. M. CHESNEY.

The patient whose history I wish to present is isolated and hence has not been brought up from the ward. She is a white woman, aged 48, the wife of a farmer. She was admitted to the Barnes Hospital on February 18, 1921, complaining of pains in the left lower quadrant, weakness and loss of weight and stiffness in both hands and the left knee. Her parental history is negative so far as her own history is concerned. She had pneumonia 19 years ago and 10 years ago had a fall following which she was in a hospital for six weeks. Diagnosis of abscess in the abdomen was made from which complete recovery was had without operation. In October, 1920, she had an attack of pain in the left lower quadrant and one week later pain in the right upper quadrant, radiating to the back, followed by diarrhea and fever for three weeks, during which she was confined to bed. Since then she has had diarrhea and abdominal pain off and on, and four weeks before admission a mild attack of arthritis involving right wrist and fingers. Previous to onset of her illness in October, 1920, her husband and two of her children had what was diagnosed as typhoid fever.

General physical examination was negative except for tenderness in gall bladder region and left lower quadrant, which has been constant. Her highest temperature since admission has been 100.4, pulse has ranged from 86 to 110, averaging 90, leucocytes 8,000, urine shows a faint trace of albumin and some casts. Gastric analysis shows hypochlorhydria. There has been no jaundice. X-ray plates of gall-bladder region negative. The findings of greatest interest have been those associated with the study of the gall-bladder contents.

On four occasions magnesium sulphate was introduced into her duodenum by duodenal tube according to the method advised by Lyon, and bile was recovered by siphonage on three occasions. The typhoid bacillus was recovered from each specimen of bile and from the stools.

It is clear that in this case we are dealing with a chronic cholecystitis due to the typhoid bacillus. It is interesting to speculate as to whether the illness she had last autumn was or was not typhoid fever, and how long the carrier condition has persisted.

Her Widal reaction is negative, both to the shock strain and her own organism.

From the standpoint of public health the case is of interest because this woman milks cows and sells milk and cream to a dairy which presumably ships that milk to St. Louis.

DISCUSSION

Dr. Graham: I should like to ask if the question of removing the gall-bladder has been considered with this patient. Of course, as we all know, re-

moval of the gall-bladder has not always resulted in the success with which one might suppose would occur in typhoid carriers. Nevertheless as I understand it, this patient has a definite history of cholecystitis which might make the indication of cholecystectomy greater.

Dr. Chesney: McCrae in Osler's System of Medicine states that cholecystectomy has not been overwhelmingly successful.

2. THE HEPATIC FACTOR IN ANAPHYLAXIS.—By DR. W. H. MANWARING.

The anaphylactic reaction in dogs is characterized by a peripheral vasomotor paralysis (Biedl and Kraus), causing a sudden and rapid fall in arterial blood pressure. Primary anaphylactic vasodilation cannot be demonstrated in the extra-hepatic tissues of anaphylactic dogs. The co-operation of the liver is in some way essential for the production of the characteristic fall in blood pressure. This necessary hepatic factor* is evidently an explosive formation or liberation of vasodilator substances by the anaphylactic liver parenchyma, a reaction similar to the demonstrated explosive formation or liberation of antithromic substances (Nolf) and antienzymic substances (Pick and Hashimoto) by these cells. The anaphylactic reaction in dogs is, therefore, essentially an explosive hepatic autointoxication.

The anaphylactic reaction in guinea pigs is characterized by bronchio-constriction and vasoconstriction. If a mixture of defibrinated anaphylactic blood and specific foreign protein is repeatedly passed by perfusion methods through an isolated anaphylactic liver, the mixture not only loses its power to call forth the characteristic bronchial and vascular reactions in isolated anaphylactic lungs, but acquires the property of producing the opposite reaction, a bronchio-dilation and vasodilation. This loss of anaphylactogenic power is, therefore, evidently due, in part at least, to an explosive formation or liberation of vasodilator and bronchio-dilator substances by the anaphylactic liver parenchyma. These substances presumably serve as prophylactic and recovery substances in guinea pig anaphylaxis.

The vasodilator and bronchio-dilator substances, operative in both canine and rabbit anaphylaxis, are not split products of the specific foreign protein, since qualitative or quantitative changes cannot be demonstrated in the foreign protein after repeated perfusions through an anaphylactic liver. Our present working hypothesis is that the depressor substances are exaggerated amounts of the normal hepatic internal secretions (metabolic products) formed or liberated as a result of excessive functional activity by the hepatic cells.

DISCUSSION

Dr. Opie: Studies of Dr. Manwaring published several years ago have shown that phagocytosis within the liver is an important factor in the destruction of bacteria. This study has further emphasized the importance of the liver in the phenomena of immunity.

Dr. Erlanger: During the war the physiological department here worked intensively at the problem of traumatic, not anaphylactic, shock. In the course of this work it was found that a condition resembling, if not identical with, shock could be induced by any means that markedly slowed the general circulation for a period of about two hours. Among the means employed to slow the circulation were partial occlusion of the aorta or of the inferior vena cava, and the continuous intravenous injection of adrenalin. Whether shock was induced by these or by other means the pathological picture revealed

at autopsy always was the same and was the very picture that Dr. Manwaring describes as occurring after death by anaphylactic shock. Another feature observed in our experiments on the shock producing effects of a slowed blood flow was a peculiar type of cardiac irregularity which possibly was the same as that observed by Auer and Robinson in anaphylactic shock.

In view of these observations I would like to ask Dr. Manwaring whether it might not be possible to ascribe the pathological changes he has found in anaphylactic shock and also the cardiac irregularities described by Auer and Robinson to the consequences of the fall in arterial pressure rather than to any primary and direct effect of the so-called anaphylotoxin?

Dr. Manwaring: These low blood pressures only come after one-half hour or more. The anaphylactic reaction takes place in one or two minutes.

3. A NEW INTERPRETATION OF THE MORPHOLOGY OF THE NERVOUS SYSTEM.—By DR. RAYMOND A. DART, University College, London.

The principle of ectodermal origin of nervous tissue was laid down by His in 1868 and the hypothesis was extended by Balfour and others providing an origin of all neuroblasts from the neural tube. A considerable part of the ganglionic elements of the head region have been found by Beard, Platt and Landacre to arise from placodes located in the ectoderm lateral to the medullary region. Entodermal origin of neuroblasts for visceral elements in the VII, IX, X, cranial nerves have been noted by J. P. Hill, Elliot Smith, Shellshear and the author. In 1851 Weber demonstrated that the sympathetic system is formed independently of the neural tube. The first appearance of the so-called primary "anlagen" of the sympathetic system is in inextricable relationship with the mesoderm. It seems necessary therefore to revise the notion of the origin of the neural tissue as conceived by His.

With the differentiation of the various supporting tissues of the body from the indifferent cells of the somite, there arise from neuroblasts similar indifferent cells for the innervation of these tissues. Somite agrees with the placode in that (1) it gives rise to neuroblasts, (2) to supporting tissue. The neural tube is regarded as a series of bilateral segmented placodes. The anterior horn cells must be appreciated as primarily extraneural. The facts involve a revision of the conception of the neurobiotaxis of Ariens-Kappers. The placodal conception better harmonizes the nervous system of vertebrate and invertebrate and provides an hypothesis for the origin of the former. Also from this new point of view, the problems of segmentation and of the mesoderm seem to be more correctly appreciated.

DISCUSSION

Dr. Terry: I have been greatly interested in the hypothesis which Dr. Dart has presented this evening, and believe that he will find further evidence in its support.

The idea is by his own term "revolutionary" and, provided that there is good reason to revise a theory which has stood for years, we should hail the man who has the courage to start the revolution. Dr. Dart expects opposition to his hypothesis, and if he continues to urge it with the interest, enthusiasm and belief in it which he has already manifested, he will arouse discussion which will call for re-examination of the weak points in the current theory as well as a critical examination of the claims for the new one. His discussions are of great value to in-

investigators from the stimulation which accompanies and follows them, irrespective of whether the hypothesis itself can be supported or should fail.

As to the method which Dr. Dart has employed thus far, namely, that of comparative anatomy and utilizing the direct observations of neurologists: We are presented with a rich background of facts which indicate high probabilities of the soundness of many of his conceptions. It seems to me that such a question as the relationship between the form of the nervous system of the invertebrate and vertebrate will be solved so far as it ever can be, chiefly by the comparative method.

On the other hand, solution of the question of the origin of the nervous tissue has been greatly advanced by the experimental method as indicated by the work to which Dr. Dart has referred.

It has been a pleasure and stimulus to the members of the department of anatomy to have had Dr. Dart with us as a Rockefeller Fellow in Anatomy this winter, and our regrets at his leaving are accompanied with best wishes for his success in his studies to be carried on in the laboratory with Professor Elliot Smith of University College.

Dr. Erlanger: While Dr. Dart was speaking it occurred to me that we are now in the possession of means of putting his hypothesis to a crucial test. In Harrison's laboratory Davenport Hooker has excised the neural tube of tadpoles in a stage of development preceding the outwandering of nerve elements. He found that under these circumstances the animals developed to the stage in which the myotomes became irritable and the heart began to beat spontaneously. Does not Dr. Dart's hypothesis stand or fall with Hooker's assertion that his developing tadpoles were nerveless?

Dr. Burrows: This paper of Dr. Dart's is most interesting. The only criticism one has is that the argument is built up on morphological rather than experimental data. The cells which he calls neuroblasts are what we have termed and more or less proven to be Schwann sheath cells. In the tadpole these cells come from the dorsal part of the neural tube. Harrison removed this part of the tube and found them failing to form about the developing nerves from the anterior portion. In the chick they come very likely from the ventral part of the neural tube.

In the tissue culture neuroblasts may be recognized by their ability to form axis cylinder processes.

It seems to me very unjust in the light of our present knowledge to accept theories built upon methods of study which leave in question the nature of the cells. This is certainly true of the morphological or histological methods.

If Dr. Dart is willing to assume that the nervous system develops ventrally because primitive forms have only a ventral nervous system, then his theory stands.

The question arises—is this a just way to look at the problem? Why not place the problem upon much more definite grounds? In the cultures of older embryonic tissue nerves grow from fragments of the gut wall and from fragments of the neural tube. Why not remove the neural tube at an earlier period and see if they still develop in this ventral region?

I see no reason why they might not develop primarily in this ventral region, or in both localities, but my conclusion is that such morphological studies add nothing to the question. The experimental method must ultimately give the answer.

Dr. Dart, closing: In answer to Professor Erlanger's remarks, I wish to say that the experiment he has referred to has been performed, as is well

known, in Nature. The amyletic monster lacks a spinal cord and in most of the instances, brain as well: a central nervous system is wholly lacking. Now in these cases the peripheral nervous system is present and recently it has been shown that motor nerve endings are present. In the absence of a neural tube nerves are present.

As to Dr. Burrow's criticism of my hypothesis being supported by morphological and histological data and not by the experimental method I must point out that the results of direct observation, made independently and verified, form a trustworthy basis for reaching the truth by the inductive method. The His theory was so founded and wholly supported until very recently. It is my expectation to test my questions in the coming months by experiment. It is however inconceivable to me that there be but one way of solving a problem and furthermore one can ask where are the actual boundary lines between morphological, histological and experimental methods?

BOOK REVIEWS

THE AMERICAN RED CROSS IN THE GREAT WAR. By P. Davison, Chairman of the War Council of the American Red Cross. New York: MacMillan Co., 1920; 302 p.

This book is a vivid, semi-detailed, semi-statistical account of the war work of the American Red Cross. It was, and is, a marvelous organization, enlisting universal interest and enthusiasm, raising prodigious sums of money, and with speed and comradeship getting marvelous results.

The value of the work cannot be reckoned by its bulk nor by its \$60,000,000 market value, but it moulded public opinion, and silently and eloquently endorsed the policy of the Government. Two million hours of work was done in this nation-wide factory in eighteen months; that is 200 years of labor—a marvelous factory; no hours, no pay-roll, the limit of its production was never reached, yet every item in its output was known and controlled at the National Red Cross Headquarters in Washington.

The home service cared for the families of soldiers and also located families for men, and men for their families. In the supplies and transportation departments estimates were given showing that the Red Cross furnished and transported material quietly and more efficiently even than the Government.

The overseas work was pioneer work, rehabilitating French families, furnishing necessary food and clothing, cooking utensils, farming machinery, etc. A graphic account that grips the heart is that of Evian les Bains, "The Gateway of a Hundred Sorrows," and the return through it of the refugees who had been carried out to work in the German mines, half of them children, crammed back into France when industrially valueless, half clad, half starved, half dead.

Praise is given to England and her Red Cross work, to Switzerland, to Belgium and her Queen Elizabeth, to Italy and her Red Cross and tuberculosis work. It is an interesting account of the versatility of a big endeavor. First, organizing ample means for caring for the various needs of our own army here and overseas; and, second, getting the relief to Europe in the shortest possible time, and so avert what we know would have been a colossal catastrophe.

The book is a well told story of the success of a big organization in which we all had a part, and in the telling is a subtle appeal for the continued support of the work.

F. L. B.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., AUGUST, 1921.

NUMBER 8

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ORIGINAL ARTICLES

THE BETTERMENT OF HOSPITAL CONDITIONS*

HERMAN E. PEARSE, M.D.

KANSAS CITY, MO.

The changes that are coming about in the attitude of the world towards standards of living have so affected the question of hospitals that hospitals are fast becoming of paramount importance everywhere. The day of isolated effort is giving way to the united efforts of groups. Groups of physicians need laboratories and technicians. These find their best setting in hospital life.

Hospitals were built as a necessity in early days and were largely confined to charitable work of churches. About twenty-five years ago surgical work took on an added impetus. The fifteen years preceding had seen the discovery of antiseptic surgery and the invasion of all the great cavities of the body with more or less success, and the surgery of disease came into its own. It called loudly for a place and a setting in which surgical operations could be done under the most favorable circumstances.

From 1890 to 1900 new hospitals began to spring up, and from 1900 to 1920 has seen the development of the great, private pay hospital consisting of fifty to five hundred beds, and carrying an overhead expense of hundreds of dollars a day. Coincident with this the trained nurses' profession developed very rapidly, and passed in its progress from a wage of ten dollars a week to one of thirty-five and forty dollars a week, and from the nurse as a menial to the nurse as a professional woman. It was from the growth of the great private hospitals with their wards of pay patients and highly trained and highly developed special nurses,

that the charity hospitals have been compelled to take their cue.

With the rapid development of hospitals came the trend of the profession to the cities and to the hospitals in which to do their work. It is so much easier to obtain results surrounded by all the facilities of a modern hospital that physicians became impatient with the handicap of isolation. Hospitals grew. Laboratories multiplied. Specialists advanced in skill. Surgery grew rapidly in scope and importance. The surgery of disease, particularly abdominal and pelvic disease was established and the surgeon was sought for in many cases where the physician had formerly been in demand. Ambitious men, commercially ambitious men, were not slow to see the better economic position of the surgeon, receiving large fees from patients gathered in a hospital as compared with the physician driving about to his patients in isolated communities.

New hospitals were opened. Ambitious surgeons promoted organizations to build and own hospitals. Many of these hospitals depended largely for their support, in fact most of them did, on the payment of patient's fees, and the fees were made high enough that they not only paid the expenses but paid quite handsome profits to their owners. Consequently such hospitals were as open as a metropolitan hotel. Any surgeon whose patient had the price for rooms could have the room. Whatever the doctor chose to do in the way of treatment or operation he was allowed to plan and execute. No record was required, no check was placed upon the individual work; in fact, it was considered a decided insult to in any way inquire what the doctor was doing in the hospital as long as the patient took a private room and paid for it.

It became apparent about ten years ago that in some instances hospitals were being abused, or rather that patients were being abused in some hospitals and that occasionally hospitals were being made the means of such abuse. unnecessary operations were being done; the

*Address in the Public Meeting at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

patients were exploited; exorbitant fees were charged for things that did not require great skill. Physicians were paid fees to bring patients to the hospital; fee splitting with surgeons took place and rebates were allowed. The matter came before the profession at its great annual gatherings and received discussion. As usual the healthy sentiment in the medical profession undertook the cure of its own ills rather than wait for outside interference, and in 1913 the American College of Surgeons began its propaganda for reform.

The best men of America were called into conference, and after a year of discussion certain conclusions were reached, based on the rights of patients who were sick in hospitals, upon the rights of communities who supported hospitals and upon the rights of physicians and surgeons who worked in them. Certain conclusions have been reached as to standards and procedure. It is agreed that every hospital should have a definite minimum standard of excellence. Until this is reached the efforts of its staff must be untiring toward attaining this end. The minimum standard must include:

(1) A decent building and grounds where it will be possible for the sick to be treated and nursed.

(2) A nursing staff of capable trained nurses.

(3) An equipment to include (a) chemical laboratory, (b) pathological laboratory, (c) roentgen-ray laboratory, and (d) record room.

(4) An organized staff of physicians and surgeons.

(5) The above must be governed by a hospital board whose aim is not commercial; who seek the cure of patients; who endeavor to give value received for every dollar the patient pays, and of every dollar of money given to support free beds. Finally given the building and equipment, and the nurses, and the records and filing system, staff and the governing board, there must grow up a hospital conscience, and a hospital honor, and a hospital character as clean and as honest and as upward-looking and as forward-looking as the responsibilities and duties of a doctor to his patients demand.

The American College of Surgeons now found it advisable to enlarge somewhat upon the essentials enumerated above and to that end has set out its minimum standard of what a hospital should be to give fair service to its patients. This is as follows:

The American College of Surgeons' Minimum Standard

1. That physicians and surgeons privileged to practice in the hospital be organized as a

definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word staff is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are (a) competent in their respective fields and (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever be prohibited.

3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide:

(a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)

(b) That the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery, and obstetrics; the clinical records of patients, free and pay, to be the basis for such review and analyses.

4. That accurate and complete case records be written for all patients and filed in an accessible manner in the hospital, a complete case record being one, except in an emergency, which includes the personal history; the physical examination, with clinical, pathological, and X-ray findings when indicated; the working diagnosis; the treatment, medical and surgical; the medical progress; the condition on discharge with final diagnosis; and, in case of death, the autopsy findings when available.

5. That clinical laboratory facilities be available for the study, diagnoses, and treatment of patients, these facilities to include at least chemical, bacteriological, serological, histological, radiographic, and fluoroscopic service in charge of trained technicians.

The American Medical Association Standard

The American Medical Association joined in at once, adopting the idea of a minimum standard below which a hospital was hardly doing justice to its patients. They, too, defined more clearly what the equipment should be and what history writing should be and what the staff should do. Their standard is

as follows, basing the needs of a hospital for the training of interns:

Tentative Schedule of Essentials in a Hospital for the Satisfactory Training of Interns

Prepared by the Council on Medical Education of the American Medical Association

I. THE STAFF OF THE HOSPITAL.

1. There must be an organized staff.
2. Staff physicians should be men of unquestionable integrity both professionally and morally.
3. They should be proficient in the special fields in which they work in the hospital.
4. They should give personal attention to the patient under their charge, some member of each department visiting the hospital every day, and every member of the staff should visit the hospital at least once each week.
5. They should assume an obligation to direct and supervise the training of the interns admitted to the staff.
6. (a) A clinical conference of the attending staff and the interns should be organized and held at frequent intervals at least monthly, at which new cases and the problems they present should be discussed. (b) There should also be clinical and pathological conferences, for the attending staff and interns where the antemortem clinical picture is presented and compared with the necropsy findings. (c) There are also hospital medical societies at which staff members and interns are encouraged to present cases which have been worked up from the clinical point of view and on which they have read up the available literature.

II. THE EQUIPMENT OF THE HOSPITAL.

1. A pathologic department equipped with facilities for necropsies, this work to be in charge of an expert, who may be a member of the staff skilled in such work.
2. One or more small clinical laboratories for work by the intern or in direct connection with the wards for the routine examination of blood, urine, stools and gastric contents. Within the hospital there should be also a clinical laboratory in charge of an expert who shall be responsible for the more technical, chemical, bacteriologic and serologic work and examinations.
3. A roentgen-ray department in charge of an expert roentgenologist and equipped to do roentgenographic, fluoroscopic and therapeutic work.
4. A working medical library containing a fair supply of modern standard text and reference books, the better medical journals, and suitable charts and models. Bound volumes

of the better medical journals for recent years constitute a very satisfactory part of a hospital medical library.

5. Adequate provision for the housing and recreation of interns.

III. HISTORIES AND RECORDS.

1. Complete histories should be taken, giving the patient's complaint, physical examination at time of admission to hospital, laboratory findings, description of operation, if any, daily record of case, condition and date when discharged from the hospital, end-results, and, in case of death, necropsy findings if necropsy is performed.
2. The histories should show, by signatures or initials, the persons writing them or parts of them. This will show not only the work of the intern, but also the supervision over it by members of the attending staff. In hospitals where senior medical students act as clinical clerks, it should be the duty of the interns to supervise and correct the histories written by the students and the records they keep.
3. The records should be carefully kept and placed in charge of a trained historian. This will not only guarantee better records and better care from the patient's point of view, but also will actually protect the hospital itself, especially in certain medical legal cases.
4. The records should include an alphabetical index of the patients, another arranged by diagnoses, and, for surgical cases one arranged from the standpoint of the regional part involved. For the alphabetical index cards might be used which would show the end-results, sometimes referred to as the "summary" of the case.

The Catholic Hospital Association Standard

The Catholic Hospital Association have endorsed the plan for a hospital improvement. On June 20, 1918, at their meeting in Chicago the following resolutions were passed:

Be it Resolved: That we, the Catholic Hospital Association of the United States and Canada, now assembled at Chicago in our third annual convention, approve of the work being done by the American College of Surgeons for the standardization of hospitals, and assure the College of our fullest co-operation in its endeavor for the betterment of hospitals and the resultant increased welfare of mankind.

Be it Resolved: That we, the members of the Catholic Hospital Association, pledge ourselves to organize controlled staffs in our hospitals; to establish or continue an adequate system of case records, with a Sister in charge having full authority to demand the careful co-operation of doctors, internes, and nurses; to secure from our superiors, staffs, or friends, funds properly to equip all necessary laboratories and to bring about as soon as possible the scientific training of our Sisters and technicians of

all kinds, anesthetists, dieticians, record keepers, and social service experts.

We further pledge ourselves to urge all surgeons who are privileged to practice in the hospitals of the Association, and who are not at this time Fellows in the American College of Surgeons, to qualify as soon as they are able for Fellowship in the College.

We further wish to express our desire that all doctors who practice in our hospitals be or become, as soon as practicable, members in good standing of their respective county medical societies and contribute their share to the active medical life of said societies.

We further wish to express our conviction that the secret division of fees, as condemned by the American College of Surgeons, is an unethical and nefarious practice which we pledge ourselves to keep out or root out of our hospitals.

On June 21, 1918, at a meeting in Chicago of Bishops and Archbishops (or their representatives) of the Catholic Church in the United States and Canada to consider the program of the College in relation to Catholic hospitals, the program of the College was approved.

The Army Medical School, the Navy Medical School, the American Trained Nurses' Association, the Association of American Medical Colleges, the American Hospital Association and many others have endorsed the plan.

Dr. M. T. McEachern, Superintendent of Vancouver General Hospital, says after years of experience in practically administering the standard in a hospital: "The minimum standard is not, perhaps, so simple as it looks. But certainly it does not impose too great a burden of effort upon the doctor or upon the hospital. It calls for no undue expenditure of money. It is not impertinent, for it is based upon the sound principles of practice which the profession long ago accepted. It forces a constructive and co-operative scrutiny over all medical work in the hospital; unnecessary surgery, incompetent surgery, lax and lazy medical service, and all commercialism in medicine go down before it.

"The minimum standard is not a theory. Wherever it is tried with sincerity, it succeeds. One result of it, too, is that it swiftly submerges personal prejudices among doctors and unites them under those bonds which have always made the profession great.

"Again, *World's Work* last spring assigned to an investigator the task of making a report upon the effect of the minimum standard among hospitals. This report was published in the magazine for June, 1920. With regard to the minimum standard the writer, Mr. Hawthorne Daniel, says in part:

"The statement is simplicity itself, and yet, with all of its simplicity it contains just the suggestions that lead to the conservation of lives and the elimination of unnecessary operations; just the suggestions that bring about the conscientious care that every patient in every hospital has a right to expect.

"From coast to coast the idea is changing the conditions in hospitals. Everywhere there is the ferment of development, the activity of improvement. . . . The world of the hospital is changing. An advance normally to be expected in twenty years has come in three. For this opinion I am indebted to President Henry S. Pritchett of the Carnegie Foundation."

As chairman for several years of the Committee on Hospitals of this Association, I must again call attention to the need of staff study of hospital conditions and staff effort to remedy them. Commercialism with its fee splitting and its unnecessary operations must be searched for and eliminated, and in each community the men of our profession must do this themselves. The standardization committee is not a police committee. They do not enforce a standard. The profession of America and its people do that. The committee will help any hospital improve; will assist them in organizing; will help install its record system; will help in any way, but the responsible management of each institution must carry on the work and each staff must direct, advise and assist the managers in their task.

It is impossible to get away in the conduct and up-building of a hospital without competent record keeping. Good record keeping does not require any blanks. It does not require any expense. It only requires careful attention to the details on the part of the doctor. A plain piece of paper headed "Personal History" is as good as anyone's blank. Another piece of paper headed "Physical Examination" is as good as any blank. If the real history taking is done, and if the real physical examination is done and a record of it written the day of the patient's entrance into the hospital, the character of the service improves from every angle point. Good record clerks must be hunted for, and usually it is necessary upon introducing a record system to obtain a competent record clerk from a hospital already having one, and allow two or three months for the training in of a competent clerk who wishes to learn to keep records.

It is up to the State Medical Association of Missouri to make all of its hospitals high-grade hospitals, and to bring credit to the medical men of the state, and to the hospital people of the state. If we do this, money in abundance will be furnished by every community to establish hospitals wherever they can be needed. If we keep commercial methods in our hospitals and exploit patients in them, money will not be forthcoming for the building of new hospitals, and for the better equipment for those already builded.

The keynote of the whole situation is record

writing, record filing, and record study. It is case history writing, case history filing, and case history study. It is careful physical examination writing and careful physical examination study that will build up the doctor, build up the hospital, and improve the condition of the patient. Let us work together for this end, remembering that the keynote of a successful hospital is well-ordered, active, well-patronized record room.

1305 Rialto Building.

HOSPITAL DIETS

WALTER BAUMGARTEN, M.D.,

WALTER FISCHEL, M.D.,

AND

HORACE W. SOPER, M.D.

ST. LOUIS.

In order to systematize the management and the ordering of diets in the hospital, the Medical Staff of St. Luke's Hospital, represented by the members who are publishing this report, as a committee, with the valued assistance of Miss Fagan, dietitian to the hospital, have arranged the list of diets which form the body of the present article. The diets which have been evolved for various diseases as the result of recent metabolic and biochemical studies have become so definite, and require such exact preparation that it has been deemed desirable for administrative purposes, to gather them together in an easily available form. The diets selected are those which it is thought will simplify and facilitate hospital administration.

The first four diet lists are general in character. They are intended for patients in various stages of illness and convalescence from diseases which require no adjustment of diet other than may be demanded by the general conditions of their illness. In the fifth list (diabetic diet) no specific articles or quantities can be designated, as its most important feature consists in that it should be adapted to each individual case. The principles of its application may be found in Joslin's Monograph on diabetes melitus, to which the reader is referred. In the hospital it is desired that the diet for each individual case be determined on the basis of the quantity of carbohydrate, protein and fat content desired, leaving it to the dietitian to work out the actual articles of each meal.

The nephritic and hypertension diets permit of more definite specification, so that lists containing low, medium and high protein quantities and caloric values have been set down. It is, however, to be understood that when

greater individualization is desirable, it should be carried out on recognized principles.

Finally, the writers would point out, that effective use of many of the diets will be greatly enhanced by the aid obtainable from a well-functioning clinical laboratory and laboratory for blood chemistry.

DIET LISTS.

- I. Liquid Diet.
- II. Soft Diet.
- III. Light Diet A.
- IV. Light Diet B.
- V. Regular Diet.
- VI. Diabetic Diet (Allen) — Individual Diets specified.
- VII. Low Proteid Diet: General.
- VIII. Low: (25 g.) Protein Nephritic Diet.
- IX. Medium: (35 g.) Protein Nephritic Diet.
- X. High: (50 g.) Protein Nephritic Diet.
- XI. Mosenthal (Renal Functional Test).
- XII. Typhoid Diet.
- XIII. Coleman's Milk Diet.
- XIV. Ulcer Diet.
- XV. Lenhartz Ulcer Diet.
- XVI. Stomach cases.
- XVII. Colon and Rectal cases.
- XVIII. General cases.
- XIX. Cardiac Decompensation Diet.
- XX. Karrell Diet.
- XXI. Anti-Constipation Diet.
- XXII. Purin-free Diet.

Every physician is requested to designate by number the Diet he wishes to specify for his patient. Complete lists may be seen by applying to the nurse in charge of the Division.

I. LIQUID DIET.—Feedings every two hours, 6 oz. each.

Meat broths.
Meat juices.
Strained soups.
Fruit juices with water.
Albumenized drinks.
Cereal gruels.
Tea.
Coffee.
Cocoa (if permitted).
Milk (if permitted).
Bulgarian milk.

II. SOFT DIET.—Feedings every three hours.

Any liquid food.
Cream soups.
Milk—whole and Bulgarian.
Custards.

Junkets.
Ice cream and ices.
Gelatin.
Cereals.
Eggs—soft cooked.
Milk toast—butter.
Stewed fruits—well cooked and strained.
Cottage cheese.
Tapioca.
Rice.
Blanc mange.

III. LIGHT DIET—A.—Any liquid food or foods on Soft Diet:

Vegetables, puree of.
Potatoes, baked or mashed.
Rice.
Desserts: Tapioca, rice, cornstarch puddings, prune whip.
Bread: White and whole wheat.
Fruits: Fresh and stewed; baked apples.
Jellies and preserves.

IV. LIGHT DIET—B.—Light Diet A with the addition of:

Meats: Chicken.
Sweet breads.
Lamb chops.
Tender steak.
Fish and oysters.
All cooked vegetables.

V. GENERAL HOSPITAL DIET.—

Breakfast:

Orange, grapefruit, berries or other fresh fruits.
Stewed fruits.
Shredded wheat biscuits, Dr. Price's All-grain Food, Ralston's Breakfast Food, rolled oats, bran or cracked wheat, with cream and little sugar.
Eggs, soft cooked, seven minutes or poached.
Corn muffins, graham muffins with butter and honey, syrup.
White bread, toast, Vienna rolls.
One cup coffee or cup of cocoa or glass of hot water and cream.

Dinner:

Creamed vegetable soup. Meat broths. Meat soups without fat. Roast beef, roast lamb, roast chicken, roast turkey without dressing. Cranberry jelly. Fruit jellies.
Stewed chicken, stewed lamb. Boiled and baked ham.
Broiled steak, broiled lamb chops. Fresh fish, baked.
Stewed or baked white onions, cauliflower, peas, corn, lima beans, okra, stewed or baked tomatoes, baked or broiled egg plant, artichokes, beets, oyster plant, car-

rots, spinach, asparagus, string beans, well mashed turnips, stewed celery.
Raw tender celery, ripe olives.
Potatoes well mashed, baked or creamed.
Rice well cooked.
White, graham, whole wheat, rye, or corn bread or toast. Vienna rolls, corn muffins with butter, honey and syrup.
Lettuce, tomato and fruit salads with French or Mayonnaise dressing. Crackers.
Cheese. Stewed fruits. Raw fruits.
Custards, gelatines, cornstarches, tapioca, junket, prune whip, blanc mange.
Soft vanilla ice cream. Light cakes, such as sunshine or sponge cake.
English walnuts, pecans, raisins, dates, figs.
Bulgarian milk, hot water and cream or cool water.

Supper:

Mixed vegetable soups. Creamed vegetable soups.
Spaghetti. Schmier Kase. Boston baked beans.
Eggs: poached, soft cooked, omelet.
Vegetables same as at lunch.
White, graham, whole wheat, rye, or corn bread or toast, Vienna rolls, corn muffins with butter, honey or syrup.
Stewed fruits. Raw fruits.
Custards, gelatines, cornstarches, tapioca, blanc mange, prune whip, junket.
Bulgarian milk, glass of hot water and cream or cool water.

VI. Diabetic Diet (Allen-Joslin).—Diet arranged with dietitian to meet individual requirements. Amount of carbohydrate, protein and fat, and the number of calories to be specified by the physician, and worked out in detail by the dietitian.

VII. Low Protein Diet.—Cereals: Oatmeal, shredded wheat biscuit, Ralston's Breakfast Food, Dr. Price's Allgrain Food, Pettijohn. With cream and sugar.

Bread: Whole wheat, Graham, rye, corn bread (coarse meal); Graham rolls, bran biscuits, Graham crackers, Educators, Triscuit. With cream and sugar.

Green Vegetables: Spinach, asparagus, egg plant, oyster plant, carrots, beets, beet greens, cauliflower, cabbage, Brussels sprouts, squash, baked pumpkin, gumbo, green peas, lettuce, tomatoes, rhubarb, kohlrabi.

Starchy Vegetables: Potatoes, rice, spaghetti, hominy grits.

Stewed Fruits: Peaches, pears, apricots, plums, prunes, cherries, cranberries, berries of all sorts, figs, apples, apple sauce, baked apples. Canned fruits are satisfactory if re-cooked. No preserves. Fruit jellies. Oranges and grapefruit but no other uncooked fruits.

No fine cereals. No white bread, no soda crackers, no rolls or biscuits made of white flour. No pepper, peppersauce, horse radish, ketchup, mustard, condiments.

Salt in moderate quantity. No alcohol. No tea, coca, chocolate, coffee. No soups.

Meat (fish, flesh or fowl) to be added after seven to ten days in quantities of two ounces or as directed. No milk or eggs or foods made of these.

Nephritic Diet (Special). Protein grams and calories specified by physician. Diet planned and figured in the diet kitchen.

XI. MOSENTHAL DIET (RENAL FUNCTIONAL TEST).

All foods from diet kitchen to be salt free, salt for each meal will be furnished in weighed amounts.

All foods or fluids not taken must be weighed or measured after each meal and charted.

Allow no food or fluid excepting at meal times.

BREAKFAST—8:00 a. m.

100 gms. oatmeal, ½ tsp. sugar.
30 c.c. milk, 60 gms. bread (2 slices).
20 gms. butter.
160 c.c. coffee
1 tsp sugar }
40 c.c. milk } 200 c.c.

DINNER—Noon.

180 c.c. meat soup, 100 gms. beefsteak.
130 gms. potatoes (boiled, mashed or baked).
Green vegetables as desired.
60 gms. bread (2 slices) 20 gms. butter.
180 c.c. tea
1 tsp. sugar }
20 c.c. milk } 200 c.c.
250 c.c. water, 110 gms. tapioca or rice pudding.

SUPPER—5:00 p. m.

2 eggs (cooked any way desired).
60 gms. bread (2 slices) 20 gms. butter.
180 c.c. tea
1 tsp. sugar }
20 c.c. milk } 200 c.c.
1 portion stewed or fresh fruit.
300 c.c. water.

8:00 a. m. No food or fluid is to be given during the night or until 8 o'clock next morning (after voiding) when the regular diet is resumed. Patient is to empty bladder at 8 a. m. and at the end of each period as indicated below. Specimens are to be collected for the following periods in properly labeled bottles: 8 a. m.-10 a. m., 10 a. m.-12 noon, 12 noon-2 p. m., 2 p. m.-4 p. m., 4 p. m.-6 p. m., 6 p. m.-8 p. m., 8 p. m.-8 a. m.

XII. Typhoid Diet. Amount of food, time of feedings to be specified by the doctor. Cal-

VIII. LOW NEPHRITIC DIET.

Protein, 25 gms. Calories, 1200.
No salt in food or on tray. Weight in gms.

Food	Breakfast	Dinner	Supper	Protein	Carbo- hydrate	Fat	Calories
Grapefruit	100				5.0		20.0
or							
Orange, peaches, strawberries, etc.....	100				10.0		40.0
Cream of Wheat.....	20			2.2	15.2	.2	72.0
or							
Corn flakes	20			1.0	16.2	.3	72.0
Bread	20	20	20	5.2	29.8	.6	146.0
Butter	10	10	10			25.0	225.0
Cream	60			2.0	2.0	12.0	120.0
Sugar	10	10	10		28.3		113.4
Vegetables, 5% group.....		300	300	10.0	30.0		160.0
or							
Vegetables, 10% group.....		300	300	10.0	60.0		280.0
Rice (uncooked weight).....		40		3.2	31.6	.1	140.1
Potato			90	3.0	18.0		90.0
Canned pineapple		100		.4	36.0	.7	153.0
Canned peaches or pears.....			100	.7	10.0	.1	47.0
				25.5	206.9	38.8	1278.8

IX. MEDIUM NEPHRITIC DIET

Food	Protein, 35 gms.			Calories, 1800.			
	No salt in food or on tray. Weight in gms.						
	Breakfast	Lunch	Dinner	Protein	Carbo- hydrate	Fat	Calories
Grapefruit	100				5.0		20.0
or							
Orange, peaches, strawberries, etc.....	100				10.0		40.0
Cream of Wheat.....	20			2.2	15.2	.2	72.0
or							
Corn flakes	20			1.0	16.2	.3	72.0
Bread	20	20	20	5.2	29.8	.6	146.0
Butter	20	20	20			50.0	450.0
Cream	45		45	3.0	3.0	18.0	180.0
Sugar	10	10	10		28.3		113.4
Egg		1 egg		6.0		6.0	75.0
Rice (dry weight).....		40		3.2	31.6	.1	140.1
Potato			90	3.0	18.0		90.0
Meat (cooked)			30	8.0		5.0	75.0
Vegetables, 5% group.....		150	150	5.0	15.0		80.0
or							
Vegetables, 10% group.....		150	150	5.0	30.0		140.0
Canned pineapple			100	.4	36.0	.7	153.0
Canned peaches or pears.....		100		.7	10.0	.1	47.0
Olive oil (on salad).....		15	15			30.0	270.0
				35.5	191.9	110.7	1823.7

X. HIGH NEPHRITIC DIET

Food	Protein, 50 gms. No salt in food or on tray.			Calories, 2400. Weight in gms.			
	Breakfast	Lunch	Dinner	Protein	Carbo- hydrate	Fat	Calories
Grapefruit	100	100			10.0		40.0
or							
Orange, peaches, strawberries, etc.....	100				10.0		40.0
Cream of Wheat.....	30			3.3	22.8	.4	108.0
or							
Corn flakes	30			1.5	24.3	.4	108.0
Bread	30	30	30	7.8	44.7	1.0	219.0
Butter	15	30	30			62.5	562.5
Cream	60		60	4.0	4.0	24.0	240.0
Sugar	10	10	10		28.3		113.2
Stewed prunes or fruit.....	120			2.4	83.1		342.0
Egg			1 egg	6.0		6.0	75.0
Rice (dry weight).....		50.0		4.0	39.5	.1	175.0
Potato			90	3.0	18.0		90.0
Meat (cooked)		60.0		16.0		10.0	154.0
Canned fruit, peaches, pears, etc.....			100	.7	10.0	.1	47.0
Vegetables, 5% group.....		150	150	5.0	15.0		80.0
or							
Vegetables, 10% group.....		150	150	5.0	30.0		140.0
Olive oil (on salad).....		15	15			30.0	270.0
				50.4	290.4	134.1	2570.1

Food	Amount	Carbo- hydrate	Protein	Fat	Calories
Milk (whole)	1 oz.	1.5	1.0	1.0	20.0
Cream (20%)	1 oz.	1.0	1.0	6.0	60.0
Cream (40%)	1 oz.	1.0	1.0	12.0	120.0
Egg	1		6.0	6.0	75.0
Custard	1 serv.	15.4	7.0	7.0	155.1
4 oz. milk					
1/2 egg					
10 gm. lactose					
Junket	1 serv.	15.4	4.0	4.0	113.6
4 oz. milk					
10 gm. lactose					
1/4 Junket tablet					
Oatmeal gruel	1 oz.	1.8	.6	.2	11.4
Vanilla ice cream	1 serv.	63.6	6.0	26.0	506.4
4 oz. 20% milk					
2 oz. whole milk					
60 gm. lactose					
Bulg. buttermilk	1 oz.	1.3	.8	.1	10.1
Lemonade	6 oz.	21.5			86.0
1 oz. lemon juice					
20 gm. lactose					
H 20—5 oz.					
Albumenized lemonade	6 oz.	21.5	3.1		98.4
Orangeade	6 oz.	25.2			100.8
2 oz. orange juice					
20 gm. lactose					
4 oz.—H 20					
Albumenized orangeade	6 oz.	25.2	3.1		113.2
Egg white	1		3.1		13.0
Egg nog	6 oz.	9.0	12.0	12.0	195.0
1 egg					
6 oz. milk					
Clear broths	No food value.				
Cream soups	6 oz.	9.0	6.0	6.0	120.0

ories of diet to be totaled from diet list by nurse in charge.

XIII. Coleman's Milk Diets in Typhoid Fever. See page 264, Proudfit's "Dietetics for Nurses."

XIV. ULCER DIET.—First Day: 10 per cent. cream or egg albumen water or 1 oz. junket of 10 per cent. cream (alternating) 1 oz. every hour. 1 oz. 10 per cent. cream—C-1; P-1; F-3; Calories 35. Continuous proctoclysis (3 per cent. glucose, 2 per cent. soda bicarbonate. Omit at night if interferes with sleep). 1 oz. albumen water—C—O; P-6; F-01; Calories 2.6 (1 egg white to 4 oz. H 20). 1 oz. junket—same as 1 oz. 10 per cent. cream.

Second Day: Same as first day; water by mouth if well borne. Continue proctoclysis.

Third Day: Same as first day.

Fourth Day: 2 oz. 10 per cent. cream every hour (70 calories). Continue proctoclysis.

Fifth Day: 3 oz. 10 per cent. cream every

two hours (105 calories). Continue proctoclysis.

Sixth Day: 4 oz. 10 per cent. cream every two hours (140 calories). Continue proctoclysis.

Seventh Day: Feed every 2½ hours—1200 calories per day. Discontinue proctoclysis. 1 glass water ½ hour before each feeding. Use very little salt in diet. Diet is to be composed of the following foods: 6 oz. Junket (176 calories), 6 oz. custard (251 calories), 6 oz. milk, 1 egg, 1 tablespoonful lactose, 6 oz. gelatin (66 calories), 6 oz. oatmeal gruel c. 2 oz. cream (177 calories), 1 coddled egg (75 calories), 4 oz. Bulgarian buttermilk c. 2 oz. cream (200 calories).

Eighth Day: Same as seventh day, 1200 calories.

Ninth Day: 1300 calories, composed of foods listed on seventh day.

Tenth Day: 1500 calories a day.

Eleventh Day: 2000 calories a day.

Twelfth Day: 2500 calories per day, com-

posed of foods listed on seventh day and in addition: 6 oz. cream of potato soup (345 calories), 6 oz. cream of wheat or farina c. 4 oz. cream (348 calories), 6 oz. boiled rice c. 4 oz. cream (423 calories), 1 oz. corn flakes c. 2 oz. cream (222 calories), 6 oz. tapioca pudding (282 calories), 1 serv. ice cream c. lactose 4 oz. (260 calories), 4 arrowroot wafers c. 1 sq. butter.

Thirteenth Day: Same as on twelfth day.

Fourteenth Day: Same as on twelfth day.

Fifteenth Day: Same as above with the addition of the following: 6 oz. cream of celery soup (275 calories), 6 oz. cream of corn soup (275 calories), 6 oz. cream of asparagus soup (275 calories), 6 oz. cream of spinach soup (275 calories), 2 sl. toast c. 2 sq. butter, 30 gms. (325 calories), 4 tbsp. cottage cheese c. 1 T. cream (122 calories), $\frac{1}{2}$ cup puree of potatoes (112 calories), $\frac{1}{2}$ cup puree of spinach (53 calories).

XV. LENHARTZ ULCER DIET.—First Day: Milk, 25 c.c. at 6, 8, 10, 12, 2, 4, 6 and 8 o'clock.

Beaten eggs, 16 c.c. at 7, 9, 11, 1, 3, 5 and 7 o'clock.

Second Day: Milk, 37 c.c. at 6, 8, etc.; beaten eggs, 24 c.c. at 7, 9, 11, etc.

Third Day: Milk, 50 c.c. at 6, 8, etc.; eggs, 30 c.c. at 7, 9, etc.; sugar, 20 gms. (added to beaten eggs).

Fourth Day: Milk, 62 c.c. at 6, 8, etc.; eggs, 40 c.c. at 7, 9, etc.; sugar, 20 gms. (added to beaten eggs).

Fifth Day: Milk, 75 c.c. at 6, 8, etc.; eggs, 48 c.c. at 7, 9, etc.; sugar, 30 gms. (added to beaten eggs).

Sixth Day: Milk, 87 c.c. at 6, 8, etc.; beaten eggs, 56 c.c. at 7, 9, etc.; sugar, 40 gms. (added to beaten eggs); scraped beef, 12 gms. at 8, 12 and 4 o'clock.

Seventh Day: Milk, 10 c.c. at 6, 8, etc.; eggs beaten, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; rice, boiled, 33 gms. at 8, 12 and 4 o'clock; sugar, 40 gms. (added to beaten eggs or rice).

Eighth Day: Milk, 112 c.c. at 6, 9, etc.; beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; boiled rice, 33 gms. at 8, 12 and 4 o'clock; sugar, 40 gms. (added to beaten eggs or rice).

Ninth Day: Milk, 125 c.c. at 6, 8, etc.; beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; boiled rice, 66 gms. at 8, 12 and 4 o'clock; zwieback, 20 gms. at 9 and 5 c. scraped beef; sugar, 40 gms. (added to beaten eggs or rice).

Tenth Day: Milk, 125 c.c. at 6, 8, etc.;

beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; boiled rice, 66 gms. at 8, 12 and 4 o'clock; zwieback, 20 gms. at 7 and 5 o'clock; chicken (chopped), 50 gms. at 11 o'clock; butter, 10 gms. at 7 and 5 o'clock c. zwieback; sugar, 40 gms. (added to beaten eggs or rice).

Eleventh Day: Milk, 125 c.c. at 6, 8, etc.; beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 30 gms. at 9, 1 and 5 o'clock; boiled rice, 100 gms. at 8, 12 and 4 o'clock; zwieback, 30 gms. at 7 and 5 o'clock; chicken (chopped), 50 gms. at 11 o'clock; butter, 20 gms. at 7 and 5 o'clock c. zwieback; sugar, 50 gms. (added to beaten eggs or rice).

Twelfth Day: Milk, 125 c.c. at 6, 8, etc.; beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; boiled rice, 100 gms. at 8, 12 and 4 o'clock; zwieback, 30 gms. at 7 and 5 o'clock; butter, 20 gms. at 7 and 5 c. zwieback; chicken (chopped), 50 gms. at 11 o'clock; Sugar, 50 gms. (added to beaten eggs or rice).

Thirteenth Day: Milk, 125 c.c. at 6, 8, etc.; beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; boiled rice, 100 gms. at 8, 12 and 4 o'clock; zwieback, 40 gms. at 7 and 5 o'clock; chicken (chopped), 50 gms. at 11 o'clock; butter, 20 gms. at 7 and 5 o'clock; sugar, 50 gms. (added to beaten eggs or rice).

Fourteenth Day: Milk, 125 c.c. at 6, 8, etc.; beaten eggs, 30 c.c. at 7, 9, etc.; one soft boiled egg at 6, 10, 2 and 6 o'clock; scraped beef, 23 gms. at 9, 1 and 5 o'clock; boiled rice, 133 gms. at 8, 12 and 4 o'clock; zwieback, 50 gms. at 7 and 5 o'clock; butter, 20 gms. at 7 and 5 c. zwieback; chicken (chopped), 50 gms. at 11 o'clock; sugar, 50 gms. (added to beaten eggs or rice).

XVI. POST-OPERATIVE DIET.—For Stomach Cases.

First Day: 3 per cent. glucose and 2 per cent. sod. citrate as proctoclysis. Water as tolerated.

Second Day: Junket or oatmeal jelly (2 per cent.) at a feeding every three hours. Continue glucose as proctoclysis.

Third Day: Feed every two hours. Junket, oatmeal jelly and Bulgarian milk and cream ($\frac{2}{3}$ and $\frac{1}{3}$); 2 oz. at a feeding.

7:00 a. m. Junket.

9:00 a. m. Oatmeal jelly.

11:00 a. m. Bulgarian milk.

1:00 p. m. Junket.

3:00 p. m. Oatmeal jelly.

5:00 p. m. Bulgarian milk.

7:00 p. m. Junket.

(One or two feedings during the night if awake.

Fourth Day: Feed every two hours. Same as on third P. O. day with the addition of custards, blanc mange, gelatin, served with sugar or milk and cream. One seven-minute egg.

Fifth Day: Increase quantity to 4 oz. with feedings every two and one-half hours apart. Use same foods as on fourth day.

Sixth Day: Same as on Fifth Day.

Seventh Day: Same as on Sixth Day.

XVII. POST-OPERATIVE DIET. For Colon and Rectal Cases.

First Day: Water as tolerated.

Second Day: Feedings every 2½ hours, alternating the following foods: 8 oz. meat broths, 6 oz. Bulgarian milk, 2 coddled eggs.

Third and Fourth Days: Same as second day.

Fifth Day: Serve three meals per day with intermediate broth feedings. And to the above diet beef, lamb, fish and poultry (roasted, boiled or broiled); eggs (soft cooked, scrambled, omelet).

Sixth Day to Twelfth Day: Same as on fifth day.

Ninth Day: Change to light Diet B.

XVIII. POST-OPERATIVE DIET (for General Cases).

First Day: 3 per cent. glucose and 2 per cent. sod. citrate as proctoclysis. Water as tolerated.

Second Day: Feedings every two-three hours. Liquid foods as: broths, albumenized drinks, (e. g., orange and lemon). Bulgarian buttermilk, tea, coffee without cream.

Third Day: Three meals a day, with nourishment at 10:30 a. m., 4:00 p. m. and 8:00 p. m. Soft diet as: Custards, blanc mange, ice cream, junkets, cereals (cooked), cream soups, gelatin, soft cooked egg, milk and milk toast.

Fourth Day: Same as on third day.

Fifth Day: Light Diet as scheduled in Light Diet List.

Sixth and Seventh Day: Same as on fifth day. After that, Light Diet B unless otherwise specified.

XIX. CARDIAC DECOMPENSATION DIET.

Fluids are to be restricted to 1½ quarts in 24 hours. They are to be taken between meals and sipped slowly.

Salt: Quantity to be designated by physician; in any case in limited quantity. No condiments.

Meals should be uniform in quantity, at definite intervals. They may consist of: Milk, eggs, rare meat, poultry, fish; well baked

bread and rolls; well cooked potato, spinach, asparagus, cauliflower and other green vegetables (all cooked); stewed fruits (with very little sugar); custards, junket, blanc mange, tapioca, ice cream (not rich).

The number of calories should be dictated by the physician, to be worked out by the dietitian. Starches, sugar and fats, gravies, etc., fried foods) are to be greatly restricted or entirely avoided.

The following diet is an example of severe restrictions: All foods to be salt free. Feed every 2½ hours—6 feedings per day (8:00 a. m., 10:30 a. m., 1:00 p. m., 3:30 p. m., 6:00 p. m., 8:30 p. m.). Give 4 oz. water every 2½ hours—½ hour before feeding time. 4 oz. junket (80 calories), 2 oz. scraped beef (122 calories), 2 coddled eggs, (150 calories), 6 oz. chicken broth c. rice, 6 oz. custard (251 calories), 4 oz. ice cream, 1 sl. toast ½ inch thick c. 1 sq. (13 gm.) butter (150 calories), 1 sl. milk toast ½ inch thick c. 4 oz. milk and ½ sq. butter (180 calories).

XX. KARRELL DIET. Salt free. Suitable for some cardiac decompensation cases.

For first five to seven days (8:00 a. m., 12:00 a. m., 4:00 p. m., 8:00 p. m.) 200 c.c. milk. No other fluids.

Eighth Day: Milk as above; 10:00 a. m., 1 soft boiled egg; 6:00 p. m., 2 pieces dry toast.

Ninth Day: Milk as above; 10:00 a. m., 1 soft cooked egg, 2 pieces dry toast; 6:00 p. m., 1 egg and 2 pieces dry toast.

Tenth Day: Milk as above; 12:00, noon, chopped meat, rice boiled in milk, vegetables; 6:00 p. m., 1 soft cooked egg.

Eleventh and Twelfth Days: Same as on tenth day. All foods to be salt free. Gradually increase diet further when the heart is practically compensated. All meats and vegetables added at first should be chopped.

XXI. ANTI-CONSTIPATION DIET.

Cereals: Purina Mills bran, oatmeal, shredded wheat biscuit, Ralston's Breakfast Food, Pettijohn, Dr. Price's Allgrain Food. With cream and either sugar or salt.

Bread: Whole wheat, graham, rye, bran, corn bread (coarse meal), graham rolls, bran biscuits, graham crackers, educators, triscuit. With plenty of butter.

Green Vegetables: Spinach, string beans, asparagus, egg plant, oyster plant, beets, beet greens, carrots, cauliflower, cabbage, Brussels sprouts, boiled onions, squash, baked pumpkin, green peas, lettuce, celery, tomatoes, artichokes, rhubarb, kohlrabbi, gumbo, rutabago.

Stewed Fruits: Peaches, pears, apricots, plums, prunes, cherries, cranberries, berries of all sorts, figs, apples, apple sauce, baked apples. Canned fruits are satisfactory if re-cooked. No preserves. Fruit jellies. Or-

anges, grapefruit, but no other uncooked fruit.

No fine cereals. No potatoes, rice, spaghetti, hominy, grits, dried beans or peas (baked beans). No white bread; no soda crackers; no rolls or biscuits made of white flour. No desserts except stewed fruits as above. No pepper, peppersauces, horse radish, ketchup, condiments. Salt in very moderate quantity. No tea, cocoa, chocolate. Meat of any sort in moderate quantity. Eggs (not more than two) as desired. No cheese. Coffee in moderation.

XXII. PURIN FREE DIET.

Breakfast: 1 serv. fresh or stewed fruit (100 gms.), 4 oz. farina, cream of wheat, etc., excepting oatmeal, 2 oz. cream, 1 T. sugar, 30 gm. toast c. 15 gm. butter, 6 oz. milk, 1 egg.

Lunch: 6 oz. cream soup, 1 med. size baked potato, green vegetables c. butter, 2 sl. bread (60 gm.), 30 gm. butter (2 T.), light dessert: rice, tapioca or cornstarch pudding, 6 oz. milk, 1 serv. cottage cheese.

Dinner: 6 oz. cream soup, 1 serv. boiled rice c. 2 oz. cream, vegetables (excepting legumes) c. butter, 1 egg, 1 sl. bread (30 gm.), 2 sq. butter, 1 serv. stewed or fresh fruit, 6 oz. milk.

AUTISTIC THINKING*

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When little Paul Make-Believe, age seven, becomes a swaggering broncho buster, seems to have great difficulty in roping and catching a wild horse, which in reality is nothing but an inanimate stick, and then rides and tames him; or this same stick becomes a fiery cavalry horse and he an officer of cavalry leading a platoon against the enemy and with his little wooden sword slays scores of this imaginary enemy; this same stick may be suddenly changed into an automobile and he into the chauffeur, or into a railway engine and he the engineer speeding across the continent, he stubs his toe and falls; a terrible wreck ensues with a loss of many lives. Again it is a ship sailing the seven seas, is boarded by pirates and his little wooden sword becomes a cutlass with which the attacks are repelled, or it is a submarine diving beneath the waves and stealthily stalking the battleships of the enemy; his wooden sword becomes a torpedo which he launches, a mighty explosion results and the ship is sunk. Again it becomes an aeroplane and he the aviator; in it he sails over the highest mountains. While it is a horse it is fed and watered, and punished if it is unruly, it is petted and scolded; as an au-

tomobile, a railway engine, a ship, or an aeroplane it is supplied with the appropriate fuel for its motive power. This child, who is a normal representative of childhood, is indulging in normal natural, wishfulfilling tendencies of childhood. His thinking is normal and his reactions to that thinking are normal.

Children of all classes of society, of all peoples, of all times, indulge in this type of thinking, and their elders approve and call it healthy imagination. It is a part of their preparation for the affairs of adult life. With their phantasies they bridge the years intervening and attempt to participate in those affairs before the time of their participation has arrived. They publicly live their fairy tales and many of the phantasies of childhood are carried into adult life.

We, each of us, have our fairy tales. We do not live them but when we are alone we day-dream, we build aircastles, and while under the spell of these phantasies we possess those advantages in which we are most hopelessly lacking. We are brilliant, rich, popular, have power, are healthy and handsome. In the presence of others the normal adult keeps his fairy tale hidden away in his brain out of the sight of strangers, and it may be so securely hidden that he himself is not aware of its presence; but oftentimes without his knowledge the imprisoned fairy stretches forth its hand and exercises a profound influence upon the things we do and say, upon our bearing, the tone of our voice, our phraseology, the books we read, the games we play. So, while we may not be aware that we are living a fairy tale, we are in reality doing that very thing to a considerable degree. The phantasies of the child usually represent the wish that he may be grown up and grand. Likewise much poetry deals with the phantasies of the poet and is wishfulfilling in character. In it he may transform his unhappy love into a happy one, he may glorify it in such a way that it appears to him tragically beautiful and sublime; his hero is a part of his own soul, and if he lets him perish it is because he is a personification of one of the tendencies which the poet wishes to overcome in his own life; or of one that has stained his conscience with guilt. The death of his hero may atone for the poet's own crime. Goethe punishes himself in *Clavigo* and *Weisslingen* for his desertion of *Frederica Brion*. The ambitions of Schiller were realized in the *Brothers Moor*, in *Fiesco*, in *Wallenstein*, and in them he saw to what end his ambitions must inevitably lead. Certain real effective needs of the poet are given expression in his poetry. He may take as vital an interest in his characters as in actual human beings and they seem very real to him. It is said that friends of the poet Kleist, who

*Read before The Jackson County Medical Society, April 26, 1921.

had just drawn the dying scene of Penthesilea, found him dissolved in tears. Poetry is closely related to mythology. Between the two stands legendary lore. The study of folk lore, fairy tales and legends, has led to the conclusion that the principles of wishfulfillment and symbolism appear characteristically in them. Ricklin, in his analysis of such fairy stories as are found in Grimm, Russian fairy stories, and Icelandic Sagas, deals particularly with these principles. He lays stress upon the appearance of certain similar pictures in all these stories no matter what their origin. There appear to be some common features that are more fundamental than race or environment. He traces these fundamental features to certain infantile psychological characteristics.

In his analysis of dreams and myths, Abraham calls attention to the fact that if a considerable number of dreams of a large number of persons are analyzed, it will be found that certain dreams are common in their essential characteristics; that is, are fundamental and seem to belong to the race. Also, the analysis of these dreams shows that they have their root in childhood experiences. He attempts to apply to the elucidation of myths the same principles which Freud has brought to bear in the analysis of dreams. He discovers in all myths certain underlying common factors that are found in fundamental dreams. These fundamental dreams have their origin in the childhood of the race. Rank has studied and analyzed the myths relative to the birth of heroes, especially Sargon, Moses, Karna, Oedipus, Paris, Telephos, Perseus, Kyros, Romulus, Heracles, Siegfried, Lohengrin, and has demonstrated that in these myths the same psychological mechanism is found as that seen in the dreams and phantasies of childhood. The dreams of children are egocentric. The events of the dream serve for their aggrandizement. In the same way the myth makers in explaining the origin of the race have attempted to aggrandize themselves. All these investigations show that the human mind reacts according to certain fundamental principles, no matter under what circumstances or conditions it may be placed for the time being. This has been demonstrated by numerous writers upon the subject, who have pointed out the similarities amounting almost to identity in the folk lore of widely different races of separate peoples. Upon investigation we find certain relations similar in the development of the child and the development of the race, and the childhood of the race has many physical and mental likenesses to the childhood of the individual. The fantastic wish structures of fairy tales deal chiefly with things which serve for the betterment of human deficiency—Seven league boots, Hop-o-my-thumb, strength

giving belts, gloves. To the wish to be able to fly correspond cloaks and enchanted birds as a means of transport, a little bed on which one may be carried where one wishes, or one may be changed directly into a bird. The desire to eat is fulfilled by "Little table, set yourself." Magic hoods and stones serve to help against persecution; magic combs turn into forests; handkerchiefs cause great bodies of water to be interposed between the pursued and the pursuer; riches are acquired by the gold shedding mule or by vanquishing giants by magic means. There are tubes and magic mirrors to enable one to see and know what goes on over the whole world; there are magic wands for turning living into lifeless things, or into whatever one wishes, or to injure one's enemies; there are means to look into the future and to attain one's wishes; and water of life for rejuvenating this otherwise all too short existence.

Psychopathologists have demonstrated a very close analogy between the fantastic, wishfulfilling thinking of childhood, of the myth-makers, the writers of fairy tales, folk lore and much of our poetry, and the thinking of many patients suffering with various types of psychosis. Prof. E. Bleuler of Zurich was first to call this form of thinking autistic thinking, corresponding to the idea of schizophrenic autism, which, turning away from reality, sees life in fantastic pictures and is founded upon autistic thinking. He states that psychology had formerly studied only the logical laws of thinking and, together with Le Bon, Freud and Jung, first directed attention to the autistic form. He says that a knowledge of this kind of thinking is a necessary foundation for the understanding of morbid formation and that further there are important parts of the normal psyche that it is impossible to understand without a knowledge of the autistic laws. They alone throw light upon the important but hitherto almost ignored inner life of the individual; the influences which shape the creations of the poet, and those which impel people to form their views of custom and religion in their dealing with home and foreign politics. The nearer the abnormal come to the normal the better we understand them; and the better our understanding of the abnormal the more successful are we in our attempt to assist them in readjusting themselves to environment and re-establishing themselves in society. Freud maintains that our psyche has a tendency to so work over the world's picture that it corresponds to our wishes and efforts. This tendency comes to light unhindered in all situations where thoughts, as molded by external circumstances, are disturbed in their logical relations. That is the case in dreams; also in all psychic

activities of waking which are not guided by attention. Ricklin says that the poet whose longings reality cannot fill, creates for himself quite unconsciously in fancy what life has denied to him. Many of the most beautiful love songs have been written by those who were unhappy in love. Gottfried Keller had no luck with those women who corresponded to his high ideals, therefore he had the need "to commit the sweetest of poetic sins," to invent "lovely women such as are not found on this sad earth." Thus, busying himself with pictures of women is for him the substitute for love. One of the greatest writers for children of all times, Johanna Spyri, began to write when she had to give up longed-for grandchildren. She made grandchildren for herself in her poetry.

Freud did pioneer work demonstrating that the typical dream contains wishes which we in waking life will not admit. It is in the dream life that these secret wishes find expression. These wishes are common to all mankind and we meet them in the myths. As a result of his analysis of dreams and myths Freud concluded that many of the wishfulfilling phantasies of both the dreams and myths, either symbolically or directly, give expression to sexual cravings. His analysis of a particular myth, the Oedipus saga, demonstrates this fact. Oedipus, son of Laius, king of Thebes, and Jocasta, was as a suckling exposed because an oracle had prophesied to the father that the yet unborn son would be his murderer. He was saved and grew up as a king's son in the court of Corinth until he, uncertain of his origin, went to the oracle himself and received from it the advice to avoid his home because he would be the murderer of his father and the mate of his mother. On the way from his supposed home he fell in with King Laius, slew him in a quickly stirred up dispute. Then he arrived before Thebes, where he solved the riddle of the Sphinx that blocked the way and as a reward was chosen king by the people and given Jocasta's hand in marriage. He reigned a long time in peace and begot by his unknown mother two daughters. Pestilence broke out which caused the people to again consult the oracle. The messengers brought the answer that the plague would cease when the murderer of Laius was driven from the land. Messengers were sent in every direction to collect all possible information about the murder committed so long ago, and after a short time brought up unmistakable proof which convicted Oedipus of the crime, at the same time the guilty servant confessed he had not killed the child but had exposed it on a mountain whence it was carried to Corinth's king. The chain of evidence was complete and now Oedipus discovered that he had involuntarily been guilty

of the three crimes to avoid which he had fled from Corinth, namely, killing his father, marrying his mother and causing great woe to his native city. Bleuler says it was known, even at the time of the early Greeks that the story was the expression of a universal tendency, and psycho-analysis as well as the study of poetry show that even now in the love of children for their parents of the opposite sex there is a certain admixture of sexuality. It is true that this tendency will perhaps even at the time of its origin be repressed to the unconscious and come out directly only in dreams and indirectly in its results. In the autistic thinking of the neuroses and the psychoses we very often find self-accusation and hallucinations with guilty expressions of love for the parents. The gap between autistic and logical, or realistic, thinking is very great. This becomes clear to us when we perceive what logical thinking really is. First, it represents the occurrences in the outer world and their associations. By means of logical thinking we reason from cause to effect, we see regular fixed results follow our own actions. We associate the two and in order to obtain a particular result we recall that we must perform certain actions. In logical thinking we reproduce reality. In healthy persons autistic thinking is kept within certain limits by logical thinking. If the balance between such activity and logical thinking is upset autistic thinking may get the upper hand. This may occur in children who have not had enough experience to discriminate logical possibilities. Second, in our dealing with subjects which are not accessible to our knowledge of logic, as in the questions of first principles, in religion and in love. Thirdly, where for any reason the emotions obtain too great a significance, as in strong affects, either pathological or normal, whether they are caused by accidental circumstances or by the subject's own temperament. Fourthly, where the connection of associations is loosened in dreams, in schizophrenia and so on.

In autistic thinking the grossest contradictions may exist side by side and these contradictions may be within the thought itself as well as contradictions of representations with the outer world. Just as a child may be little Paul and at the same time the great general, the insane man may be Tom Jones, but at the same time God Almighty, and often in addition the President of the United States, and the King of England. While the playing child never loses the sense of feeling that he, himself, puts something into the things, in the deranged these ideas correspond to reality. But if the insane be composed in their thinking they may be partly conscious of the contradictions to what sound people call reality. The

possessor of delusional millions gets nothing out of them but the feeling of being rich. His millions buy him no luxuries or necessities but disappear when he tries to spend them. The autistic thinking of the insane workman promises him a promotion in position, which not happening, he seeks an explanation for its failure and, unwilling to accept the fault as his own, he decides that he has enemies who would keep back his fortune or slander him for his superiority. He creates these reasons and enemies out of his own autistic thinking. He has heard no one speaking evil of him but from accidental events he decides that they have spoken evil behind his back. He fears that he has enemies and this to his autistic thinking is identical with the fixed conviction that they exist. The desires of the insane may be gratified by autistic thinking. This is especially true of sexuality. The pangs of hunger cannot be gratified without real food, but sexual desires may be satisfied by mere imagination. The schizophrenic patients may feel all the delights of love through their hallucinations. We have seen that autistic thinking is illogical and admits of the greatest contradictions in the outer world and in itself. The autistic patient may do the most menial labor and at the same time believe himself to be the emperor or king, or possess very great wealth, or during his illness he may be cared for by his own family with all the kindness of which anyone is capable and at the same time believe himself to be constantly ill-treated.

An analysis of many of the psychoses and the neuro-psychoses will convince the most skeptical that the development of these disabilities is frequently wishfulfilling in character. In the realm of the neuro-psychoses this is especially true of conversion hysteria. The realities of life at times become very disagreeable and distressing to the majority of men and women. There are many individuals who do not adjust themselves well to these difficulties. They feel that they have not the ability, or are lacking in determination and desire to meet and overcome difficult situations, therefore they seek a way of escape. Some take the suicide route, others substitute a fantastic state of alcoholic intoxication for the painful and distressing realities of life, while many others, as the result of a conscious or subconscious wish, develop the fantastic state of a psychosis or a neuro-psychosis which shuts out reality with its painful and disturbing problems. In the realm of the neuro-psychoses, conversion hysteria offers many examples. A young girl is teaching school in a small town; there is but one residence at which she can obtain board and lodging. Her relations with her landlady become very unpleasant and she is much distressed because of the

situation but sees no way of escape as she is under contract to teach for a certain period of months. She suddenly develops an hysterical paralysis of arms, legs and muscles of speech. She must then give up her school, is taken to a hospital and soon recovers.

A man having domestic difficulties often wishes that he might never see his wife again. He finally decides to leave his native city but is very much distressed at thoughts of leaving. The night preceding his departure he suddenly develops complete hysterical blindness. This disability fulfills two wishes, one that he might see his wife no more, and the other that he might remain in his native city. The hysterical paralysis in the one case and hysterical blindness in the other are obviously wishfulfilling fantastic states which have been substituted for reality. In the first phase of the manic depressive psychoses there is always a period of mental depression associated with anxieties and phobias. These patients have inherited certain depressive tendencies. They are emotionally unstable but these conditions may not manifest themselves until some difficult situation in life arises and in order to avoid painful realities they react with a psychosis. Temporarily they shut reality out of their lives. In the depressive phase of this psychosis the patient is very quiet, having little to say or may refuse entirely to talk. He is negativistic to an extreme degree and in many cases it is necessary to use artificial feeding. Following or alternating with this phase we see the manic phase. In the manic phase we have psycho-motor-hyper-activity with delusions, usually of a grandiose character. Autistic thinking is strikingly manifest in this phase and as a result of this thinking the patient may be, or possess, those things and qualities in which he is normally most obviously lacking. Normally a weakling, he may consider himself a champion wrestler or a prize fighter. A single woman of uncertain age who has been disappointed in love or has never had a lover but has longed for a husband and children, believes herself to be married and perhaps pregnant, although there is absolutely no foundation for such a belief, and in some cases will suffer all the pains of delivery.

In the paranoias with their deliria of interpretation and re-vindication, wishfulfilling phantasies are given expression in delusions. They, too, offer a way of escape from the painful realities of life, and the autistic thinking supplies the patient with many things which he could not have in reality. The disease usually occurs in young adults who quite often have shown peculiarities in childhood, who have been disinclined or unwilling to adjust themselves to environment, and who have

met difficulties poorly. In the hypochondriacal stage, the stage of subjective analysis, there is emotional depression with ideas of reference. Everything that occurs about him is interpreted as having some relation to himself. This condition continues, becomes more aggravated, the ideas are not corrected and the patient by keeping by himself fails to come into that normal touch with his environment which gives to acts and circumstances their proper perspective. In the second stage, the stage of persecution, the patient believes that some malign influence is working against him, and he develops delusions of persecution. He believes that there is some organized attempt to work his injury. All the ills that befall him, all of his failures are credited to the working of this malign influence and he, very conveniently, frees himself from all responsibility. Because of the supposed attention which he is receiving he develops ideas of self-importance. According to Magnan these ideas of self-importance may come about in one of three ways. Either spontaneously, or voices may tell him that he is a great personage, or through logical deduction—if so many people or such powerful organizations are interested in his downfall he must indeed be some great personage, the rightful heir to a throne or inheritor of vast estates. In this stage he becomes less resentful and more complacent and self-satisfied. He is a great personage who will soon be proclaimed as such to the world, so why should he worry? He has thus far, by his wonderful sagacity and powers, defeated the ends of his enemies and will continue to do so until he comes into his reward.

It is in the grandiose delusions of paresis that autistic thinking is manifested to a major degree. One example will suffice by way of illustration. A man in his late thirties, who has for more than ten years been employed as brakeman on a railroad, develops paresis. In his normal day-dreaming and castle building, while living his fairy tales, he has often pictured himself as president of that particular road. In reality there seemed no chance of him even attaining a position as high as that of engineer, but now in his psychosis he can live his fairy tale and all of his dreams become realities. He is president of that road with his private car; he is not satisfied, so he becomes the absolute owner of the road and all the other railroads within the state, then within the nation, next within the entire world, and of all other means of transportation, including all the ships that sail the seas. As a man in his position needs much money he acquires one bank, then scores of banks, then he becomes the owner of all the banks and all the money in the world; next he becomes the owner of a city, then of the nation, then

of the entire world. Still not satisfied he must seek other worlds to conquer, and his fairy tale carries him to the throne of Heaven and he becomes the ruler of the universe and he is God, the Supreme Being. He talks incessantly of his wealth and power, gives many orders, arranges trips for his friends and himself to all parts of the world, issues checks for millions of money. He performs the most menial tasks around his ward, has no money in his pockets, may be dressed in rags, but fails to recognize the disharmony between his condition in reality and the condition which his autistic thinking has developed to satisfy his cravings.

The most common mental symptom found in dementia praecox is what Stransky has termed intra-psychic ataxia. By this term is meant a disturbance of co-ordination between the intellectual attributes of the whole psyche and the affective attributes, or as he calls them, the *noo-psyche* and the *thymo-psyche* respectively. It is this lack of co-ordination or intra-psychic ataxia, a separation of the intellectual and emotional reaction, that has led Bleuler to prefer the name schizophrenia to dementia praecox. The simplest manner in which this co-ordination disturbance is manifested is by lack of harmony between the expression of the affect and the idea or content of thought.

Prof. Bleuler has done more towards clearing up the psycho-pathology of dementia praecox than any other investigator of this most intricate problem. He has recently set forth his views fully in a section of the *Aschaffenberg Handbuch*. This section he denominates the group of schizophrenia, ambivalence, ambitendency and autism. He discussed in part his psycho-pathology in an address at the opening of the Henry Phipps Psychiatric Institute in 1913, and in his monograph, "The Theory of Schizophrenic Negativism." He says the predisposing cause of negativistic phenomena are, first, ambitendency which sets free with every tendency a counter tendency; second, ambivalence which gives to the same idea two contrary feeling tones, and invests the same thought simultaneously with both a positive and a negative character; third, the schizophrenic splitting of the psyche which hinders the proper balancing of the opposing and co-operating psychism with the result that the most inappropriate impulse can be transferred into action just as well as the right impulse and that in addition to the right thought or sentiment, its negative can be thought; fourth, the lack of clearness and imperfect logic of the schizophrenic thoughts in general which make the theoretical and practical adaptation to reality difficult or impossible. The autistic thinking or autism of the patient substitutes for reality a phantastic state. The

schizophrenic patient keeps reality from injuring him by not allowing it to reach him. Autism for these patients has the same significance as the walls of the cloister for the monk, or the hermitage for the saint. Plain John Smith or Mary Jones becomes a prince or princess royal, emperor or empress, king or queen. The institution in which they live, their domain, the nurses and other patients their gentlemen and ladies in waiting and loyal subjects. Life proceeds for them royally. Mental functions fundamentally involved in schizophrenic patients are association, affectivity and will. Associations lose their coherence. The threads that lead out thoughts are interrupted in an irregular manner. These interruptions may be few or many. Stereotypic tendency thus characteristically blocks the thought processes and the individual still hangs to one idea, always returning to it. There is disordered cohesion of simultaneous ideas and partial ideas and also discords in thought association. Ideas may be pathologically augmented in one field and blocked in another. The process is a true blocking rather than slowing or retardation. Disorder of emotions in schizophrenia is characterized by indifference. Unity of emotional expression is lost. The mind has not fundamentally lost its capacity to exhibit emotion, the patient being emotionally excited if painful complexes are stimulated. Ambivalence may be affective when ideas are at the same time pleasant and unpleasant. There is also an ambivalence of the will which may be termed ambitendency. Contradictory statements and acts may indicate intellectual ambivalency. As before mentioned, Bleuler has suggested the term schizophrenia as a substitute for dementia praecox, schizophrenia in the Bleuler sense meaning a splitting of the psyche an incoordination between the ideas, emotions and the will or acts of the schizophrenic.

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THE VARIOUS OPERATIVE PROCEDURES INDICATED FOR THE DIFFERENT KINDS OF GOITRE

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Increasing experience impresses upon us the need of special study if the ideal is to be accomplished in the treatment of goitre. The day has passed when the eyes or ears are operated upon by any but men who devote all their time to these subjects, while a few men are specializing in the surgery of the nervous system. The great variety of types which the thyroid presents, as well as the technical re-

quirements imposed in handling this gland, would seem to warrant a certain degree of specialization here if the best possible results are to be obtained.

The experience with hundreds of goitres in our clinic has impressed upon us the fact that four different types of operation are indicated at times. These are selected according to the severity of the case, and may be studied under three separate headings which we will indicate as (a) the form of operation, (b) where performed, (c) the anesthesia used.

1. (a) Hot water injections or peripheral ligations are reserved for the sickest patients, who are always rested in bed for a considerable time before we dare to do anything of an operative character. (b) Such operations are invariably done in the patient's room in order to minimize the risk of moving, and the psychic shock incident to the operating room surroundings. (c) Local anesthesia is always used. The tissues are infiltrated with 1 per cent. novocain solution, in which, of course, no adrenalin is employed on account of its well-known property of stimulating thyroid secretions.

2. (a) One lateral lobe is removed in patients who are considered well enough to stand a very few minutes of radical surgery, but this is done in our clinic through a lateral incision, to be described further, along the anterior border of the sternomastoid. The wound is left wide open and in many instances clamps are left in place in order to save the time ordinarily spent in making ligations. (b) This operation is invariably done in the patient's bed, for the reasons previously given. (c) Local anesthesia is always employed since it is adequate for all purposes and distinctly safer than general.

3. (a) Both lateral lobes and the isthmus are in great part removed through the collar incision, which gives the ideal cosmetic result, but the wound is left wide open to be closed a day or two later in any one of the many ways which are adequate. This third class embraces patients who are hardly well enough to be considered normal risks, and in whom unfortunate surprises might follow any damming up of the wound secretion, hence the open neck. (b) Such patients are always taken to the operating room, since they are not particularly sensitive to psychic stimuli. (c) Local anesthesia is always used for the reasons given in the other instances.

4. (a) In this group lie all the simple goitre patients who have no systemic goitre symptoms. An almost complete removal of both lobes and isthmus is made through the collar incision, which is entirely closed without drainage, since they are not sensitive in any way nor exposed to the danger of post-opera-

tive hyperthyroidism even if the cavity from which the goitre is removed be not completely dry. (b) Such patients are always treated in the operating room, since there is no reason for our not availing ourselves of its conveniences. (c) Either local or general anesthesia may be used according to the individual operator's preference. I will state in passing that no general anesthetic is ever used for any goitre work in our clinic, although I cannot deny that others find it adequate for all their needs.

I wish it were easy to define in specific terms just what patients fall in the second and third classes. Numbers one and four present great differences since the first embraces the very worst risks we get, and the fourth contains those who are operated on for mechanical obstructions or cosmetic reasons. I will state in passing, however, that one who studies the metabolic rate, makes the Goetch adrenalin test, does repeated blood pressure and leucocyte determinations, will in the course of time build up an instinct for classifying these patients more or less correctly. The procedures which we have described under the first, third and fourth headings are too well-known to deserve special mention in this connection, hence we shall devote the remainder of this article to a rather more detailed consideration of the second class, our unilateral procedure, in order that others may avail themselves of what we believe to be its useful features.

In order to get at the tumor by the shortest possible route, we make an incision just behind the anterior portion of the sternomastoid muscle, and parallel to it. This divides skin and platysma, after which the sternomastoid muscle is retracted outward sufficiently to uncover the ribbon muscles, which are split longitudinally, without, of course, any cross division of their fibres. One is astonished at this point to learn how nearly retraction can be dispensed with in displaying the growth, the patient being thus saved much of the discomfort which makes for shock and postoperative symptoms. The lobe is well isolated and the entire defect flooded with alcohol which seals up the lymphatic spaces and thus does much to prevent the absorption of toxic thyroid juices. The upper pole is divided; the stump quickly clamped off bite by bite and divided. The clamps may be left in place in order to save the time ordinarily spent in ligating, and the wound held wide open by them, thus conserving the time which would otherwise be spent in closure, at the same time guaranteeing uninterrupted drainage with almost certain prevention of postoperative thyrotoxicosis.

The employment of this simple procedure guarantees one against the imputation of en-

dangering the patient's life by doing too much, and reduces the gravity of a thyroidectomy to little more than that of ligation, in the doubtful class of cases where it is so difficult to predict the outcome of an operation. I have left more than forty light clamps on a wound of this character, without the patient being aware of their presence, though not more than a dozen are necessary as a rule. It must be admitted that there is some difficulty in swallowing during the twenty-four hours that they are in place, but no more than one sees occasionally in a patient who has had the wound entirely closed. With the exception of this one feature, it must be conceded that a neck which has been left wide open after a thyroidectomy is more comfortable than one which has been sewn up, although this will perhaps not impress the surgeon who has not employed both methods.

A postoperative therapeutic measure which is of the greatest value in quieting a patient, and bringing down the temperature is the ice pack which Crile proposed about one year ago. I am not at all sure but that we are combating nature's own therapeutic procedure when we artificially reduce the temperature, still we can safely say that we decrease restlessness and discomfort at the same time, while the gifted author of this measure is authority for the statement that the metabolic rate is brought down ten points every time we decrease the temperature by one degree.

The clamps are not touched as long as there is any evidence of postoperative storm; usually we remove all except those on the superior thyroid vessels at the expiration of twenty-four hours; the last named, however, must remain in place for forty-eight hours unless the risk of postoperative bleeding is to be taken. As soon as the clamps are out we tie skin stitches which were inserted just after the incision was made, and then held out of the way to permit the other operative manoeuvres. I must admit that the closure of the wound is not always wholly without discomfort; however, it is not strictly necessary. One is astonished upon removing the clamps to see the slit in the ribbon muscles close spontaneously when their function is asserted, to see the sternomastoid muscle slip back into place over the defect just mentioned, and to find that one may draw the skin almost together with adhesive straps, although there is a tendency for the lips of the last named structure to curl inward.

I have been very well satisfied with this procedure of leaving the clamps in position. It must be conceded, however, that it violates a certain sense of surgical refinement, hence if the operation has been unexpectedly well borne, I see no reason why one may not make

use of the comparatively few suture ligatures needed to control all the deep bleeding points which have been clamped. Where this has been done I pack the wound wide open with rubber dam, then introduce a sub-cuticular skin suture which is left loose, to be drawn tight twenty-four hours later after the pack has been removed.

The removal of the second side through an incision which is the counterpart of that on the first side, can be made within a few days, but has also been postponed until the patient has made the gain in health which is characteristic of destruction of half a thyroid gland. The secondary operation, if at a remote date, can, of course, be performed with every refinement of detail, since it will have no emergency aspect, and after it is completed, the skin wound on the first side can be excised and a secondary suture made, which will eliminate the reproach implied elsewhere in this paper, when it was stated that we, in our clinic, for reasons of a vital nature, disregard every cosmetic consideration. This will leave nothing to be desired in the appearance of the neck, excepting the location and direction of the scar, which is at most a small price to pay for an additional important factor of safety.

I purposely avoided mentioning any narcotic preliminary to the use of local anesthesia, since this question is by no means settled in my own mind. I frequently have used morphin, but it now and then causes retching and vomiting during the operation, which is highly undesirable since it not only interferes with the work, but causes the patient as much distress as might be expected from rough handling, retracting, etc. I have tried veronal, chloral and bromids extensively. Sometimes one of these drugs works admirably in a given instance, but in others none of them seem to be adequate. Unfortunately twilight sleep is not applicable here, since toxic goitre patients suffer from a functional impairment of the terminals of the sympathetic nervous system, which makes the method ineffective.

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PRIMARY MESOTHELIOMA OF THE PLEURA— WITH REPORT OF A CASE

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Primary malignancy of the pleura is a condition rarely encountered. In fact some of the authors of works on Internal Medicine do not consider the subject of sufficient importance to give it any space and others dismiss it with

a few words. In the literature we find a fairly large number of cases reported, and in these reports it is to be noted that the diagnosis is usually difficult. In summarizing these cases from the standpoint of symptomatology it would seem that a syndrome consisting of severe pain in the chest, normal or subnormal temperature, signs of consolidation and large accumulations of hemorrhagic pleural exudate would point to a malignancy. Of these signs and symptoms, the finding of hemorrhagic exudate is considered most significant, and in the great majority of the reported cases a blood stained fluid has been found.

Fraenkel¹ reported three cases in which he found extensive effusions, hemorrhagic in each instance. R. Roman² reports a case of sarcoma of the pleura with hemorrhagic effusion. E. Kornitzer,³ a case of pleural myoma giving bloody fluid on thoracentesis. McDonnell and Maxwell⁴ found sero-sanguineous fluid in a primary malignancy of the pleura. Dubray and Rosson⁵ in a recently published paper describe a case from which bloody fluid was withdrawn at least two times.

On the other hand a case is reported by Bernstein⁶ in which a straw colored fluid was obtained, but thoracentesis was done but once. Further, Kielty⁷ found a rather atypical case with extensive metastases in which no fluid was found either during life or at autopsy.

In a case which recently came under our observation, the findings were so unusual as to warrant reporting.

The patient, a male, aged forty-five, was by occupation a public school teacher and later a county official. The family history is unimportant aside from the fact that a great uncle died of cancer of the jaw. The past history is uneventful, except that twenty-two years ago a horse fell on him, crushing the left side of the chest slightly. He went through a mild attack of influenza in 1918, without complications. The present illness began in September, 1920, and he was first seen October 1, 1920, at which time he complained of pain in the lower left chest in the post-axillary line, accentuated by deep breathing. On examination the temperature was 97.8; pulse 76; blood pressure, systolic 130, diastolic 80. Physical examination showed a normal percussion note throughout both lungs, except for a slight impairment in the lower left axilla. Fremitus unchanged. A to and fro friction rub was heard in the lower left axilla. Urine examination negative. A diagnosis of acute pleurisy was made and the chest strapped with adhesive strips, relieving the pain immediately.

The patient was not seen again for thirty days during which period he took treatments from a mechano- and hydro-therapist. November first he returned complaining of shortness of breath, cough and pain in the left chest. Examination now revealed signs of fluid extending from the diaphragm to the level of the fourth rib and the diagnosis was verified by the fluoroscope. The chest was aspirated and three and one-half quarts of a pale straw-colored fluid were withdrawn. The fluid was centrifuged and the sediment stained with Wright's stain and found to contain many small mononuclear lymphocytes, but no polymorphonuclears.

This drainage afforded great relief for a few days. Subsequent notes were made as follows:

November 10, 1920: Again complains of shortness of breath. Physical examination and fluoroscopic shows reaccumulation of fluid. Chest aspirated. Two quarts of clear straw-colored fluid obtained.

November 17, 1920: Percussion note flat to level of third rib. Fremitus decreased. Breath sounds distant. Fluoroscope shows fluid extending from upper border of heart well up into axilla. Aspirated and three quarts of straw-colored fluid withdrawn. No tubercle bacilli found in exudate, but it contained a few small mononuclears. No pus cells.

November 26, 1920: Complains of severe pain in chest. Fluid reaccumulated. Aspirated and one quart obtained. Same character as before. Sputum negative for tubercle bacilli.

December 2, 1920: Complains of night sweats. Temperature 99.2. Fluoroscope shows irregular fluid level. One and one-half pints of straw colored fluid aspirated. As needle entered pleura it passed through one cm. of a hard gritty layer and patient complained of severe pain.

December 11, 1920. Now complains of pain in right chest. Right lung normal on physical examination and fluoroscopic. Lower left is flat on percussion



Fig. 1. Nov. 19, 1920. Roentgenogram showing pleura with fluid to the level of the upper cardiac border. Note absence of displacement of heart.

November 19, 1920: Pulse 96; temperature 98.6; blood pressure, systolic 115, diastolic 60; leucocyte count 6,600; polymorphonuclears 80 per cent.; small lymphocytes 14 per cent.; large lymphocytes 6 per cent.; eosinophiles 2 per cent.; basophiles 2 per cent.; Roentgenogram of chest shows a few deeply calcified lymph nodes at either hilus and a uniform haziness over the lower left lung, extending to the level of the sixth rib. This was interpreted as a thickened pleura.

November 22, 1920: Temperature 98; pulse 90; blood pressure, systolic 120, diastolic 60. Signs of fluid to level of fifth rib. Verified by fluoroscope. Aspirated and one quart of straw-colored fluid removed. Urine negative.

and fluoroscope shows no definite fluid level, but an indefinite haziness. Two attempts to aspirate unsuccessful. White count, 8,000.

December 20, 1920: Intense pain. Physical signs unchanged. X-ray picture shows increased opacity over lower left lung extending to upper border of heart. Process resembles malignancy in spite of absence of bloody fluid and presence of lymphocytes in fluid.

December 22, 1920: A diagnostician from Kansas City was called in. After careful examination he was inclined to diagnosis of tuberculosis on account of the nature of the fluid withdrawn.

December 29, 1920: Temperature 98; pulse 96; slight cough, pain not so severe.

January 4, 1921: Pain along axillary and femoral veins which are cord-like. Resemble thrombophlebitis. Temperature 99.4. Dullness over left lung to level of fourth rib. X-ray picture shows cloudiness of entire lower left lung, denser at base. Some infiltration at level of clavicle.

January 14, 1921: No change. Sputum negative for tuberculosis.

January 19, 1921: Abdomen tender, distended. Signs of small amount of fluid. Resembles tuberculous peritonitis. Has lost eleven pounds in six weeks. Left chest smaller than right. Left chest flat on percussion except at apex. Breath sounds harsh, tubular. Fine rales on inspiration, cog wheel breathing in left infra-clavicular space. Vocal fremitus

with difficulty, being adherent on left. Pericardium contains six ounces of clear yellow fluid. Membrane smooth and glistening. Right pleura shows some recent adhesions. Right lung normal on section. The left pleural cavity contains a firm whitish growth which entirely fills the lower third of the chest and tapers off to a thickness of 1 cm. at the clavicle. This entirely surrounds the lung anteriorly, laterally, and posteriorly and is firmly adherent to the chest wall as well as to the lung. A sharp line of demarcation, however, separates the growth from the lung tissue and at no place does it seem to have invaded the lung. The lung is compressed to the size of a coconut and has broken down in areas, probably a pressure necrosis. Liver is normal in

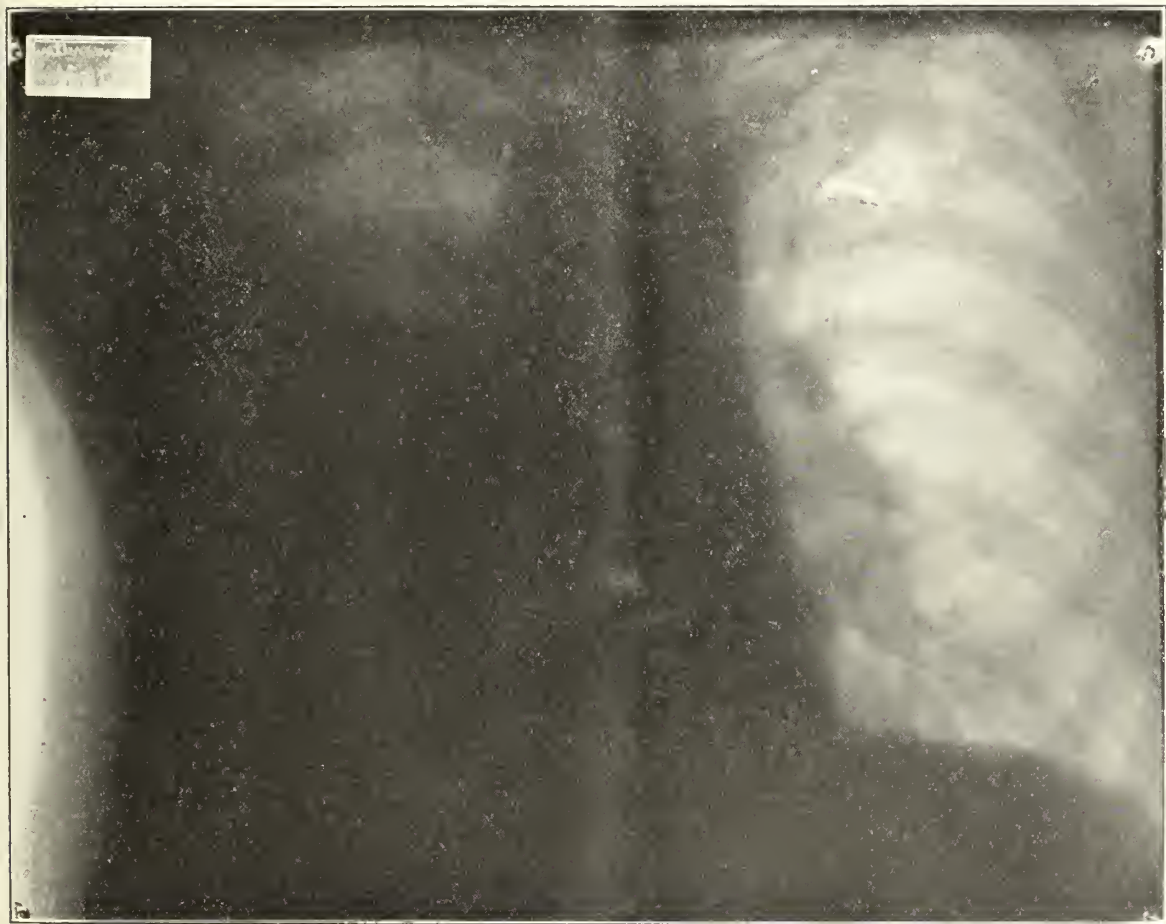


Fig. 2. Jan. 4, 1921. Process extending above third rib.

increased to egophony. X-ray picture shows entire left lung below clavicle obscured by a uniform cloud. Attempt at thoracentesis unsuccessful.

January 23, 1921: Dr. P. Y. Tupper called in consultation. Diagnosis probable malignancy. Wassermann and Tbc. complement fixation both negative.

January 31, 1921: Very severe pain. Has cachectic appearance of malignancy. Cardiac arrhythmia at times.

February 4, 1921: Pain relieved only by morphin. Arrhythmia more pronounced.

February 7, 1921: Died of cardiac failure.

Post-Mortem.—Partial autopsy secured. No organs removed. Left chest sunken. Sternum dislodged

size and consistency. Kidneys, prostate, and intestines normal. One large lymph gland found along abdominal aorta and removed. Sections of tumor, lung, liver and lymph gland were submitted to Dr. D. H. Dolley of the department of pathology of the university of Missouri. He reported the lymph gland as a definite endothelioma and the pleura tumor, while having the general appearance of an adenocarcinoma, as being probably of mesothelial origin.

Comment.—The case is undoubtedly one of primary malignancy of the pleura. While unfortunately the autopsy could not be complete in the sense that no organs were removed, a thorough search was

made for a possible primary growth in some other organ and none was found.

A point of interest in this case is the possible relation between the crushing injury twenty-two years previously and the growth which apparently arose at the same place, especially when we remember that these processes have been considered of inflammatory origin by some observers (Fraenkel, Schweningen, and others).

However, the feature of paramount interest

diagnosis difficult. According to the cytologic formulae of Widal and Ravaut⁸ an excess of lymphocytes in a pleural exudate indicates a tuberculous process. But we have here a proven case of pleural malignancy presenting complete absence of bloody exudate and an exudate containing a marked excess of lymphocytes.

Some confusion exists as to the proper classification of these tumors, and while most of them have been reported as endotheliomas, Dubray and Rosson in the paper quoted above

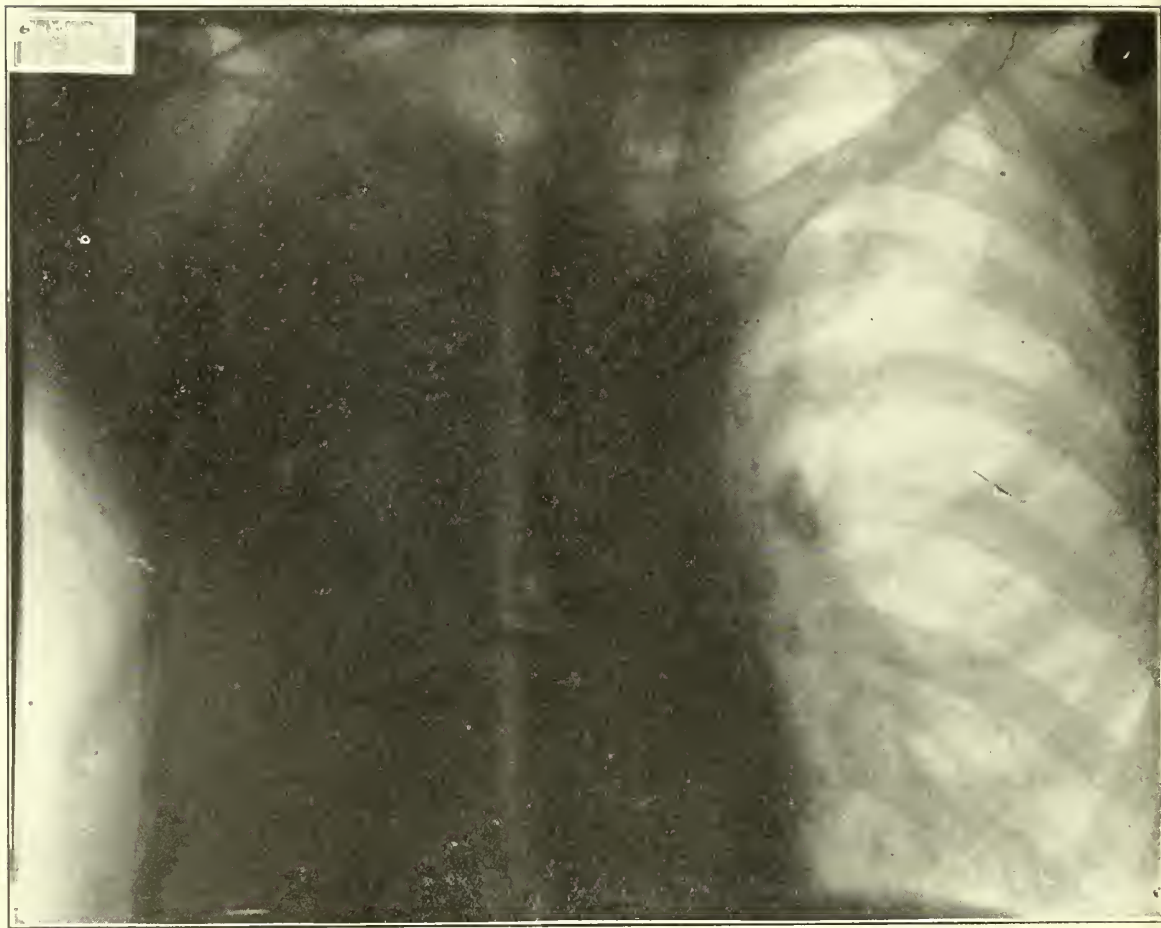


Fig. 3. Jan. 19, 1921. Entire pleura involved, nineteen days before death.

as presented by this case is the nature of the fluid withdrawn at thoracentesis. It will be noted that the fluid formed rapidly and in large quantity, as much as three quarts accumulating in seven days. This, however, is a common characteristic of the cases previously reported. But it will also be noted that, although aspirated eight times, at no time was a bloody fluid found. Furthermore, cytological examination of the fluid showed only small mononuclear lymphocytes with an occasional pus cell. It is such findings that make the

content that they are of mesothelial origin and should be designated as mesotheliomas, for which terminology they give Adami credit.

Dr. Dolley, who examined the sections, also uses this terminology in his report and for these reasons we have reported this case as a mesothelioma.

Summary. 1. Primary mesothelioma of the pleura is relatively rare.

2. Diagnosis, particularly in the early stages is a difficult matter, especially the differentiation between malignancy and tuberculosis.

3. Severe pain in the chest, accompanied by the rapid production of pleural fluid, either blood-stained or clear, with absence of fever and absence of tubercle bacilli in the sputum should suggest malignancy.

4. Cytodiagnosis may be positively misleading.

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TREATMENT OF VARICOSE ULCERS

W. L. BRANDON, M.D.

POPLAR BLUFF, MO.

Without doubt varicose ulcers have proven to be the bane of the medical profession, more especially to the general practitioner. A varicose ulcer occurs on the leg of a patient who is the subject of aggravated varicose veins, especially when the smaller venules are involved, the skin passively congested and its nutrition consequently impaired. Any injury or abrasion which would readily heal in a sound limb is likely under such circumstances to give rise to a chronic sore. In my experience the results obtained in the past have been very poor, due largely to the fact that the patient would not remain in bed, and the ulcer could not heal as long as it was congested. I have used all sorts of ointments, such as zinc oxide, ichthyol, scarlet-red, balsam peru, etc., without success, it being impossible to keep the patients quiet and get rid of the venous congestion. We are at a point where it is necessary to employ some method of treatment that can be used while the patient is up and around, therefore I employ the following:

- Glycerine28 oz.
- Water40 oz.
- Zinc oxide 1 lb.
- Gelatin 1 lb.

Mix glycerine, water and zinc oxide together and put on stove; let boil and slowly add gelatin, with constant stirring. This can be made at home on the cook stove. When all the gelatin has been added and mixed thoroughly, remove from stove and let cool. Then take to your office or home, or wherever you want to apply the dressing, and put on stove again and let it warm and when it becomes soft

put two three-inch bandages in the mixture, loosely re-rolled so they will absorb as much of the mixture as possible. Remove bandage from mixture as warm as you can handle it and apply on leg, beginning at toes, and wrap firmly up to knee right over the ulcer. With no other dressing, apply two bandages to each leg, one over the other, and let this dressing remain on for eight or ten days. Remove and apply a new bandage as before.



Fig. 1.—Before first dressing was applied.

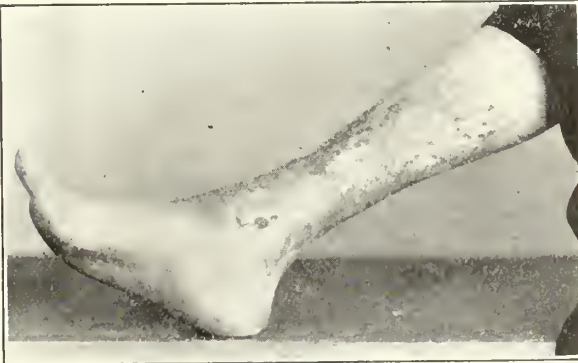


Fig. 2.—After four dressings had been applied. One month after the first dressing.



Fig. 3.—After eight dressings had been applied. Two months from the time the first dressing was applied.

The first dressing might have to be changed sooner than eight days due to moisture from the ulcer. Should the ulcer be discharging freely, cut a window over the ulcer and clean all moist bandage and re-apply right over the window. Now, putting the bandage on, is best to keep the patient in bed for one-half day with legs elevated so as to get rid of as much of the venous flood as possible before applying the dressing.

I have treated a number of such cases and find this to give far the best results of anything I have ever used. I have used from four to twelve dressings in curing them. The great advantage of this treatment is that the patients may go on with their work. After the ulcer is well I use an elastic stocking, having it made to fit the leg.

I will give the history of one of my cases.

Mrs. A., age 64, widow, housewife, American. Family history negative. Previous history negative except had varicose ulcers for ten years. Present illness, varicose ulcer.

Physical examination: A woman fairly well nourished, considering her age. An ulcer on her right leg measured two and one-half inches long, one and one-half inches wide, one-fourth inch deep. The leg up over half way to the knee showed to be dark due to venous congestion.

Diagnosis, varicose ulcer of ten years' standing. Treatment, as described.

Result: Ulcer completely healed in two months as shown in pictures made at one month intervals.

DIPHTHERIA CARRIERS.—George H. Weaver, Chicago (*Journal A. M. A.*, March 26, 1921), has tabulated 500 consecutive cases of diphtheria which were treated in Durand Hospital between February, 1918, and September, 1920. Patients with laryngeal diphtheria and those who died early are excluded. The series includes fifteen cases in which operative measures were employed in getting rid of the bacilli. The frequency with which two negative cultures are followed by positive ones early led to the adoption of three consecutive negative cultures taken at intervals of from one to three days from both nose and throat as a standard for release. After the first week, approximately half of the cases that began any week as positive became negative during the following seven days. Three weeks after the onset, 71.2 per cent. of the cases had become negative. At the end of four weeks, 83.2 per cent. were free of bacilli, and after seven weeks, less than 1 per cent. yielded positive cultures. In only a single instance were cultures positive after eleven weeks. Of the 500 patients, eighty-four, or 16.8 per cent., became carriers, that is, gave positive cultures after twenty-eight days. During 1913 to 1920, fifty-two patients entered Durand Hospital as carriers and were observed until free from bacilli with no operative interference. Of these, 55.8 per cent. were free of bacilli after two weeks, and 80.8 per cent. after four weeks. The rate of disappearance of the bacilli did not show any such regularity as was observed in the series following diphtheria. Of the fifty-two patients, nineteen had been in contact with diphtheria, and twelve gave histories of recent sore throat. The bacilli were located in the nose in nine, in two of which there was an associated foreign body in one

nostril. In ten of the fifty-two patients the bacilli persisted longer than four weeks. The persistent pharyngeal cultures were associated with abnormal tonsils, usually enlarged, with deep crypts and roughened surface. In the nasal cases there were discharges associated with enlarged adenoids and chronic rhinitis, usually secondary to accessory sinus disease. Cultures from six of these patients were tested for virulence, and a single one was non-virulent. As is the case with many bacteria, the largest factor in the removal of diphtheria bacilli from the body appears to be destruction by leukocytes. An essential factor in this process of phagocytosis is suitable opsonin. The local use of antitoxic serum and of serum produced by immunizing with the bacterial bodies has not been followed by any satisfactory results. Vaccines have not been of any certain value, and this was to be expected, as carriers usually have an abundant supply of opsonins and their blood leukocytes are active. Efforts to clean up carriers are now confined to such measures as aid in removing local conditions that favor the retention of the bacilli. Washes are employed to remove secretions and discharges. Measures are used to facilitate drainage from the accessory sinuses and the nostrils. Irritating solutions are especially avoided. When the bacilli persist after such treatment, operative procedures are instituted if the localization of the bacilli is such that any benefit can be expected. The operations performed have been tonsillectomy and, when the adenoids are enlarged, adenoidectomy. Early disappearance of the bacilli has followed the operations in every case. Removal of the tonsils and enlarged adenoids is advised at the end of a month if the bacilli persist, or as soon afterward as the general condition of the patient warrants. In small children, in whom prolonged isolation is not very objectionable and in whom operative measures are less satisfactory, it is customary to wait for the natural disappearance of the bacilli, making use of such local measures as seem indicated. When the bacilli persist in the nose, local lesions in the nostrils and, in children, foreign bodies are looked for. When an individual has become a carrier, the measures to be instituted should vary according as the bacilli are or are not virulent. In all noncontact carriers the virulence of the bacilli should be tested. This allows most such individuals to be dismissed as not dangerous to others. "Convalescent" and "contact" carriers must always be considered sources of danger. If the carriage is persistent, a test of virulence will occasionally reveal a nonvirulent bacillus and allow the possessor to be released from restraint. Persistent carriers of virulent bacilli generally present some local pathologic condition in the throat or nose, the correction of which is usually followed by disappearance of the bacilli. No satisfactory means has been devised for destroying the bacilli. When local measures are of value it is usually because they aid in correcting abnormal conditions which interfere with the destruction of the bacilli by the natural bactericidal processes of the body. If such local treatment has been unsuccessful, removal of tonsils and adenoids will usually be followed by the disappearance of the bacilli.

UNUSUAL TRANSVERSE POSITION.—Low implantation of the placenta in the case cited by Henry H. Skinner, Yakima, Wash. (*Journal A. M. A.*, May 14, 1921) caused uterine uneasiness during gestation, and for surreptitious bleeding the last few weeks of gestation. Its presence in the lower uterine segment, and, so much of it in one side of the pelvic inlet did not allow the head to engage, therefore causing the transverse position: a scapuloleva anterior.

THE JOURNAL
OF THE
Missouri State Medical Association

AUGUST, 1921.

EDITORIALS

OUR NEW PRESIDENT

Dr. Albert H. Hamel, St. Louis, sixty-fourth president of the Association, is a native Mis-

sourian, born in De Soto fifty-four years ago, a son of Herman Hamel, pioneer settler in Jefferson County and successful merchant in De Soto. It was in 1858 that the father of our new president settled in the district when transportation was primitive and railroads were unknown in the county. Dr. Hamel was born January 25, 1867, and was educated in the public schools of the county, supplemented by private tutoring. His medical education was obtained in the St. Louis Medical College (now Washington University Medical School) from which he was graduated in 1890. He went immediately to his home town where he



ALBERT H. HAMEL, M.D.

ST. LOUIS

President Missouri State Medical Association, 1921-1922

practiced until 1908 when he moved to St. Louis and successfully followed the line of practice that won him hosts of friends and patients throughout southeast Missouri—the rapidly disappearing general practitioner.

From the beginning of his medical career Dr. Hamel has been an ardent supporter of medical organizations, active in safeguarding the interests of his fellow physicians and fore-seeing medical society activities toward the improvement of public health conditions. His talents for organization and the direction of organized activities were soon recognized and while still a resident of De Soto he was elected president of the Southeast Missouri Medical Society, one of the oldest medical organizations in the state, and after removing to St. Louis he became a leading factor in the St. Louis Medical Society affairs, holding various offices that culminated in his election to the presidency of that society. In 1906 he was appointed a member of the state board of health and during the last two years of his four years of service he was president of the board. It was during his service on the board of health that the minimum standard for medical colleges was established by the board, a forward step in medical practice that has been attacked by low grade medical colleges ever since its adoption. He is a member of the Medical Reserve Corps of the Army and during the World War he accepted a commission as first lieutenant, being stationed at Fort Benjamin Harrison Hospital No. 25. He was honorably discharged with the rank of captain.

With Dr. Hamel at the head of the organization there is no doubt that the affairs of the Association will be administered with the intelligence and discrimination that come with long years of service in the councils of the representative body of physicians in the state.

PELLAGRA AND DEFICIENT FOOD

The reports of the United States Public Health Service on the threatened epidemic of pellagra in the Southern States due to an insufficient quantity of nutritious food, has induced President Harding to call for an active campaign to prevent such a disaster. Governors and health officers in several Southern States deny the accuracy of the statement of the Public Health Service, but that denial does not refute the truth of conditions that have been known to physicians, especially to pediatricians, for many years.

For the first time the gaunt form of famine can be seen stalking through our land. Great civilizations of the past have perished, not only because of failure in military prowess but because of the breaking of the whole staff of the

bread of the nation, and because of disease, such as malaria, which finally completed the downfall of the Grecian power. Medical science has been combating disease germs for long generations with marvelous success, but dietary insufficiencies as the cause of disease have been occupying the field of investigation for less than two decades, the saddest feature of this advance of medical science being that domestic animals have been thus far the chief beneficiaries, whilst children have been neglected. The pure food law enacted twenty years ago was directed only against sophistication and misbranding of foods. At that time no one dreamed that a diet amply sufficient to maintain a man in good health might be utterly insufficient to promote growth and development in children. An amended pure food law is the most pressing need of the nation. Every American child is entitled to a diet of whole wheat bread, or corn bread made from fresh unbolted corn meal, or of natural rice as a staple, with the addition of dairy products and vegetables, especially green vegetables, at every season of the year. The bread should be made with leaven, not with alkaline baking powder, and cereals, such as oat meal and whole grain foods uncontaminated by insects, should be packed under government supervision and inspection. The effects of denatured diet are seen not only in children and bottle-fed infants but in the sucklings and in the unborn, while in adults the pregnant and nursing woman suffers most from debased food.

That pellagra is a food-deficiency disease no scientifically and specially qualified person now doubts. The results of the most recent investigations compel us to say that there is only one vicarious vitamin, the vitamin of leaven, which completely supplies the lack of the innate antineuritic vitamin of grain, in some instances at least. The time-worn claim of the devitaminizing millers that green vegetables and fat in the diet will completely correct the vice of a denatured rice or corn meal or wheat or rye is an error fraught with national disaster when put into practice. It is true that a yeast bread is vastly more health producing than a bread prepared with an alkaline baking powder, but what the nation needs is the staff of bread; in other words, cereal foods that contain all the proteins, mineral formula, and vitamins, supplemented by leaven, by green vegetables, and hormonal fats or fats harmonized, that is raised to the nth power, by mixing with green foods and sufficient dairy products and meat. A vast amount of work remains yet to be done by a scientific investigator, such as the comparison in the analysis of breast milk in mothers fed on

debased food and that in mothers fed on natural food, but there is no excuse for waiting one day longer in the enactment of a pure food law which is to save the young, the child-bearing, and the bread-earning people of the United States. Furthermore, the Congress should be petitioned to stop the polishing of the rice crop of 1921, which will soon be on, and to stop the production of commercial corn meal—stripped carbohydrate which will slaughter a brood of young chickens within a few days. Commercial corn meal should be put out of interstate commerce, at least during the period of the impending famine. As for wheat products, the utterly stripped carbohydrate product of wheat, to-wit, the white flour of the 14th refinement, should certainly be put out of interstate commerce, and no food product of interstate commerce should be allowed to be marketed without stating its caloric value, its nitrogen and mineral value, and its vitamin content as proven by animal experimentation.

A large cotton grower of Mississippi told the writer several years ago that the negroes on his plantation were utterly unable to do a full day's work owing to the deficiency of their diet. In the early summer, he said, they ate roasting ears and garden products with some bacon from the store, and did pretty well. During the fall season they had corn bread made from their own cured corn taken to the mill and ground; when that supply gave out they subsisted on commercial corn meal but had no vegetables and as a result their health and strength rapidly declined during the later winter and spring months. As is well known, pellagra always begins for the first time in the spring or early summer months and the cases which have improved are prone to relapse at that period. It is not the return of the sun to the northern hemisphere, as some contend, but the change of diet.

THE MUNICIPAL FARM OF ST. LOUIS

Perhaps no more interesting and hopeful enterprise for the benefit of the most unfortunate members of the community—the insane and defective—has ever been undertaken in St. Louis than the purchase of the beautiful and fertile Scott Farm as the site for the Municipal Farm. On this tract of land will be installed the therapeutic means of restoring some of the mentally defective persons to reason and usefulness in the community, of so far improving many others that they may live at home, of making all the others infinitely more comfortable by furnishing them with an interest in life and saving them from an unwilling and deteriorating idleness.

When the doctrine of non-restraint is fully adopted the problem of supplying safe and use-

ful forms of activity for the insane widens greatly. In all hospitals for the mentally ill, a large part of the ordinary housekeeping processes is done by the patients. Clever and resourceful superintendents have given earnest thought to furnishing each patient with some form of activity suited to his physical and mental status. But picture, if you will, nearly two thousand six hundred patients gathered within the walls of the St. Louis City Sanitarium, over a thousand of whom are capable of employment more or less useful, and you will gain some idea of the perplexity of the physician in charge. With only fourteen acres of land to cultivate at this institution very few of this twenty-six hundred may be given the benefit of the outdoor occupation furnished by gardening and other activities of life upon the soil.

The fertile Municipal Farm, on the other hand, with its six hundred acres will supply this need to all those capable of benefiting by it. It will be a garden more than a farm, for neither the insane nor the defective may be trusted to operate modern farm machinery, therefore the primitive processes of hand cultivation will be necessary. One thinks of a dairy plant, of a poultry yard, of acres of berries and small fruits, the latter furnishing therapeutic occupation for women. In winter there will be thought for indoor occupational therapy, now so carefully planned by the Missouri Association for Occupational Therapy, for diversion must never be lost sight of because the patients we have in mind are capable of enjoying, and being benefited by, a due proportion of social entertainment. There is much sanity among the insane.

It must not for one moment be thought that the Municipal Farm idea is the exploitation of the labor of the insane and defective in order to save money for the city, although the application of such therapy does so result. Its whole plan and purpose is to supply curative and ameliorating influences in one of the gravest of human maladies, for which drugs are of little avail. The healthful occupation, the quiet and coolness of the country, the wholesome diet possible to furnish—all these will contribute to soothing troubled minds that are all too often coupled with aching hearts. Sanatoriums for the mentally ill should be built in the country; that is why the Municipal Farm was established.

COLONEL HENRY SMITH'S VISIT TO ST. LOUIS

The great reputation gained by Lieut. Col. Henry Smith, of the British Indian Medical Service, in cataract work evoked the interest of American ophthalmologists. The oculists

in St. Louis no less than those of other cities were desirous of seeing the master himself at work, consequently Colonel Smith was invited to visit St. Louis and give a demonstration of his method. He graciously acquiesced in both respects, the Ophthalmic Section of the St. Louis Medical Society acting as his host on June 24 and 25. A clinic was held on the 24th at which forty patients were operated upon. In two instances the ordinary capsulotomy operation was done, in two others secondary membranes were removed, and in the remaining thirty-six cases the intracapsular operation for which Colonel Smith is noted, was performed.

At the outset it is only fair to state that the operator was working amidst unfamiliar surroundings, with instruments not his own and not in the best of condition. Also, that the cases were not of his selection and the histories of the patients were virtually unknown to him. Furthermore, his audience was a critical one, and in some respects not wholly sympathetic. To have had his own highly trained assistant would have proved a great advantage. Undismayed by all this Colonel Smith courageously went ahead. An operator demonstrating his method away from home is always beset with these difficulties and in addition is generally presented with a fairly large proportion of difficult, complicated, or unsuitable cases. The clinic under discussion was no exception in this regard.

To preserve an open mind before seeing a celebrity operate is the creditable and proper attitude. To form definite opinions after viewing his performances is both human and natural. It is very doubtful if Colonel Smith made a single convert in St. Louis to his method. The intracapsular operation safeguarding the interests of the patient and giving the greatest visual result is the hope of many ophthalmologists, but in its present form the Indian operation cannot be said to meet these requirements. This is the individual opinion of the writer and may not be the opinion of others. First, the trauma to the eye is excessive; second, the proportion of vitreous losses is too great; third, the corneal incision is not conducive to rapid repair and produces in many instances a high-grade astigmatism; fourth, and in the writer's opinion one of the greatest objections to the operation as done by Colonel Smith himself, is the fact that a proper toilet of the eye is impossible; fifth, the corneal incision, large coloboma, lack of reposition of the iris, and drawn up pupil, produce an unsightly looking eye. It may be argued and justly so that vision and not a cosmetic result is the desideratum. The cosmetic result however weighs heavy with the Ameri-

can patient, especially if he knows that he can have it in addition to the visual result.

So far as the writer has ascertained no primary infection occurred in any of the cases, which is remarkable in view of the fact that asepsis in the sense common to most American ophthalmologists was not practiced. The many weary hours put in by our operators in preparing patients, scrubbing hands, and in the countless details making up an aseptic technique, were made to appear as *Love's Labor Lost*. The law of averages, however, will be found to operate in favor of asepsis as we practice it. The thumb sponge of Colonel Smith will hardly commend itself to our confrères.

Altogether, the demonstration by Colonel Smith was highly interesting and educational. If anything, the audience with possibly few exceptions was convinced that the older methods had best be adhered to, for if the man who has done 50,000 cataracts runs into so many difficulties and complications what would be the fate of the tyro! An operation does not end at the operating table. There are post-operative complications and sequelæ. The procedure giving the minimum of these is the best operation, providing always that the maximum of vision is obtained. Furthermore, we have to live with our patients.

The one advantage of the Indian operation is that the lens is removed in its capsule; its disadvantages have been enumerated.

In selected cases and in those over 60 years of age with no contraindications, the following technique embodying the central idea of Colonel Smith's procedure might be carefully tried out: First, a careful corneal section coming out at the limbus or with a small conjunctival flap; second, a clean radial iridectomy; third, a trial with a squint hook in making pressure to break the zonule. With weak zonules this is easily accomplished with slight pressure. Fourth, a careful toilet of the wound with reposition of the iris. Done in this manner it is doubtful if the number of vitreous losses will be any greater than in the older operation. They should be much less as the cases are selected. Under 60 years of age and in high myopia, or with fluid vitreous secondary to uveal disease, any intracapsular operation is contraindicated and all operations are fraught with danger. To this may be added all arteriosclerotic individuals and those with high blood pressure.

The foregoing has been written in the kindest spirit and is not meant to reflect on the personal charm or great skill and dexterity of Colonel Smith. Some of the operations, particularly the complicated ones, were most skillfully performed. One capsule remains was removed in toto, and in a cataract sec-

ondary to iritis with the iris bound down to the lens, the synechiæ were loosened and the lens removed in its capsule with no loss of vitreous in a manner demanding the greatest skill and courage. It was done in a matter of fact way as being all in a day's work.

THE NEW NURSING LAW

The new law governing nurses passed by the last general assembly is now effective and because of certain changes affecting the right of nurses to practice, our members should be familiar with its main provisions.

One phase of the law has been particularly disturbing to country physicians because it was thought that the law raised the preliminary educational standards to the full four year course in a high school for all persons engaged in nursing for hire. The new law does exact this standard for all registered nurses, but the full four year course will not be required until July 1, 1928. In communities of less than 30,000, persons may be licensed to practice as attendants on the certificate of a licensed physician, irrespective of preliminary educational standards, but such persons may not practice outside of their communities.

Many physicians were opposed to the law in its original form because they believed the requirement of four years high school credit preliminary to entering a nursing school was far too sweeping a change to make at a time when it was difficult to obtain nurses and the number entering nursing schools was discouragingly small. The bill was then modified to make provision for licensed attendants having a common school training. A further concession was made by providing for licensed attendants in rural communities to practice on the certificate of a licensed practitioner of medicine.

The new law undoubtedly regulates nursing in Missouri and does it effectually, for under its provisions no person may hereafter practice nursing for hire without a license. Nursing authorities declare that this new law is probably the most advanced nursing law in this country. On another page in this issue will be found a comprehensive synopsis of the law showing its principal features as they may affect physicians in securing nursing service.

NEW RULES OF THE NATIONAL BOARD OF MEDICAL EXAMINERS

The National Board of Medical Examiners, which has been operating as an independent examining board since 1916, with the view of establishing an examination of such standards that its certificate could be accepted by any

state board of medical examiners as satisfactory evidence that the holder was qualified to practice, has modified its rules so that the examination will be divided into three parts, taken at intervals. Hitherto the whole examination was given by the board at one period, occupying about a week.

Part I will consist of a written examination in each of the six fundamental sciences: anatomy, physiology, physiological chemistry, general pathology, bacteriology, and materia medica and pharmacology. The board reserves the right to require also a laboratory examination in any of these subjects, if not fully satisfied as to the thoroughness of the laboratory training the candidate has had.

Part II will consist of a written examination in each of the following four clinical subjects: medicine, surgery, obstetrics, and gynecology, and public health.

Part III will consist of thorough clinical examinations in the four subjects of Part II.

Instead of requiring applicants to travel to Washington in order to take the examination, as has been the custom in the past, the board will appoint associate and assistant examiners at various centers throughout the country constituting subsidiary examining boards, the National Board becoming essentially the supervising body of the examiners but reserving such control over the examinations as will assure the maintenance of the high standards that have prevailed in the past. Another important change in the rules is the amount of the fee that applicants must pay. Hitherto a nominal fee of \$5.00 has been made possible because the Carnegie Corporation has generously supplied the funds to finance the board. The new plan will put the board on a self-supporting basis and will require a total fee of \$100 for the complete examination. The last examination under the old plan was held at Boston in June.

The certificate of the National Board is officially accepted in lieu of an examination by the medical examining boards of twenty states; in twelve other states it is practically so recognized but the laws in these states require the examining board to give some form of examination themselves. In still other states the certificate is recognized by the boards but statutory technicalities prevent official recognition at the present time. The Army and Navy and the Public Health Service accept the board's certificate as equivalent to an examination by their own boards and the graduate school of the University of Minnesota including the Mayo Foundation officially accept the certificate. Abroad, the Royal College of Physicians of London, the Royal College of Surgeons of England and the Triplicate Examining Board of Scotland have extended to the holders of

the certificate of the National Board the highest recognition they can give legally, namely, admission to the final, practical examinations given by these bodies. It is not unreasonable to expect that every state examining board in our country will in the near future be permitted to accept the certificate of the National Board.

A NEW MEDICAL JOURNAL

"The International Journal of Gastroenterology" is the title of a new medical journal "which will be useful," says the editor, "to the specialist as well as to the practitioner." A unique feature of the undertaking is the interpolation of commentaries by physicians who have read the manuscripts before they are published without knowing the names of the authors of the papers. Another feature unusual in American medical journalism is the publication of papers in the original language of the author. The first issue was published in July and contains original communication, reports of cases, etc. The journal is apparently an earnest effort to establish an acceptable periodical for the use of those who are interested in gastroenterology. The editor is Dr. A. L. Sorensen, 220 West 59th St., New York. The first issue is published and presented without any advertisements of any kind and contains 120 pages with numerous illustrations. The subscription price is \$6.00 per year.

NEWS NOTES

FIVE inmates of State Hospital No. 1 at Fulton escaped June 28. All were convicts sent to the hospital on account of insanity.

DR. and MRS. RALPH L. THOMPSON of St. Louis will spend the summer in Europe visiting London and Paris. They sailed on the Aquitania July 5.

THE North Missouri Medical Association will hold its next annual meeting at Chillicothe on June 19, 1922. Dr. M. L. Clint, Meadville, is president, and Dr. Ed S. Smith, Macon, is corresponding secretary.

DR. HUDSON TALBOT of St. Louis and his small son, Charles, were injured June 24, when the automobile in which they were riding skidded and collided with a street car. Dr. Talbot suffered from a fracture of the arm and leg and considerable shock. Charles was bruised and slightly cut.

THE latest "discover" of life's panacea is a cyclist who is peddling his way to California,

where he proposes to start a "university of nature" to spread the glad tidings. Sawdust and water are the only nutrients (?) required to knit body and soul firmly together for an indefinite period of time, says this enthusiast.

THE Greene County Medical Society has recommended to the City Council of Springfield that more stringent ordinances be adopted governing the sale of milk and providing for approval after inspection of dairy plants before issuance of permits to sell milk. Sterilization of milk containers was also recommended.

A NEW catalog of books and journals published by the C. V. Mosby Co. of St. Louis has just been issued. It contains 96 pages well illustrated, describing the medical, nursing pharmaceutical and dental publications bearing the Mosby imprint. A copy of the catalog will be sent any physician postpaid upon request.

DR. G. A. JORDAN, Assistant Health Commissioner of St. Louis, has been appointed Hospital Commissioner to take effect July 15 to succeed Dr. C. H. Shutt, resigned. Dr. Jordan has been connected with the Health Department of St. Louis for thirty-four years, being Assistant Health Commissioner for the past thirteen years.

DR. ALFRED S. BURDICK has been elected to fill the vacancy as president of The Abbott Laboratories, Chicago, caused by the death of Dr. W. C. Abbott. He has been closely associated with The Abbott Laboratories for over seventeen years, and for the past six years has been vice president and assistant general manager.

THE Gradwohl Laboratories in St. Louis have moved to new quarters at 3514 Lucas Ave., having purchased the residence of Dr. W. John Harris and made alterations to suit the requirements of modern laboratory service. A complete X-ray outfit has been added to the facilities of the laboratory and rooms have been arranged for salvarsan and basal metabolism service.

THE Board of Aldermen, St. Louis, passed a bill on June 24 appropriating \$175,000 for the purchase of a large tract of land as the site for the proposed Municipal Hospital Farm. A bond issue of \$1,100,000 has been authorized by the voters to establish the farm. When completed the new institution will materially reduce the congestion in the City Sanitarium and other hospitals maintained by the city.

DR. A. L. FURTH of Cape Girardeau, chief of the resident staff of St. Louis City Hospital, completed his six year course at the City Hospital July 1 and has been succeeded by Dr. Howard C. Brascher as chief of the resident staff. Thirty-six new interns became members of the staff on July 1, thirty juniors and five seniors having completed the one and two year courses.

THE Medical Association of the Southwest will hold its annual session in Kansas City, October 25-28. The Missouri Valley Medical Association will hold its annual session at the same time and place, the two bodies combining their programs so that the occasion promises to be one of unusual interest to the members. Dr. E. H. Skinner, Kansas City, Mo., is president of the Southwest Medical Association and Dr. W. O. Bridges, Omaha, Neb., is president of the Missouri Valley Medical Association.

DR. ROBERT E. SCHLUETER, St. Louis, has been appointed Chairman of the Local Committee of Arrangements for the meeting of the American Medical Association at St. Louis in 1922. The board of trustees of the American Medical Association, who made the appointment, also announces that the dates of the 1922 meeting will be May 22-26. Headquarters for the local committee of arrangements have been established at 3525 Pine St., St. Louis. All communications for the attention of the committee should be addressed to that number.

FIFTEEN million dollars and the merger of the Presbyterian Hospital in New York with the Columbia University College of Physicians and Surgeons, the beginning of a movement that will, it is predicted, make New York the world's greatest medical center, is the news that emanated from Baltimore on Independence Day. Dr. Wm. Walker Palmer, Associate Professor of Medicine in Johns Hopkins Medical School, who recently declined promotion to full professorship in that chair to succeed Dr. Wm. S. Thayer, resigned, will be dean of the enormous institution dedicated to medical science.

A NEW public health service hospital will probably be erected at St. Louis to provide facilities in caring for disabled world war veterans. The cost of the building will be about \$2,500,000. The advantages of St. Louis as the location of this hospital were presented to the officials at Washington and a tract of land near Jefferson Barracks was proposed as the site of the building. The ground was inspected

recently by Col. Charles M. Pearsall, Assistant Inspector General of the Home for Volunteer Soldiers at Dayton, Ohio. The Secretary of War has recommended that the hospital be erected at St. Louis.

ORDERED by the circuit court to submit to an X-ray examination of her head in order to determine the extent of her injuries in an automobile accident or go without remedy in a suit for damages, a woman in St. Louis was denied a writ of mandamus by the supreme court. The woman had been examined by a physician who found no cause for the disorders she complained of and suggested an X-ray of the patient's head. The woman and her attorney declined the examination on the ground that the X-ray was a dangerous agent, but the circuit court would not proceed with the case without such examination.

FOURTEEN East St. Louis (Illinois) physicians attended a meeting of the St. Louis Medical Society May 31 and in a serio-comic vein performed the funeral rites over an imaginary casket which was supposed to contain the remains of the high standard of medical education in Missouri. The occasion furnished an opportunity for stimulating interest in the referendum and reviewing the progress of scientific medicine in Missouri during the past quarter of a century. Dr. Joseph Grindon and Dr. A. H. Hamel spoke on this subject. Dr. J. L. Wiggins and Dr. H. A. Cables of East St. Louis made interesting talks on the fight for high medical standards in Illinois.

A NEW medical association journal has been established, the *Journal of the Philippine Islands Medical Association*, the first copy of which has just reached us. It is a very neat magazine, well printed and well edited. It is established in order to create a medium of communication between the scattered medical population of the Philippine Archipelago. The first number contains 44 pages of original articles, editorials and interesting discussion of cases. It is edited by Dr. Liborio Gomez and will be published bi-monthly. It is the property and organ of the Philippine Islands Medical Association and, like other state journals, it will be sent to all members of that Association.

THE second annual meeting of the Missouri Health Officers' Association was held at Columbia June 20, 1921. Some of the subjects discussed were: "American Red Cross Cooperation," by Dr. Geo. H. Jones; "The Venereal Progress to Date," by Dr. R. L. Russell; "Physical Defects and Communicable Diseases

Among Children," by Dr. C. P. Knight; "The State General Hospital," by Dr. F. G. Nifong; "School of Medicine and Hospitals," by Dr. Guy L. Noyes. Other phases of public health work were discussed, particularly rural hygiene by Dr. Cortez F. Enloe, State Health Commissioner. The luncheon at Boone Tavern given by the State University proved an enjoyable hour for informal talks. Forty-eight members of the Conference were present.

THE board of curators of the State University has taken a definite stand in favor of establishing a four year course in medicine at the university. The board will prepare a bill for presentation at the next session of the legislature in 1923 to authorize and appropriate money for the establishment of a state hospital at Columbia to be operated in conjunction with the medical school. The Missouri State Medical Association at its last annual meeting at St. Joseph appointed a special committee to co-operate with the university in drafting a bill for the creation of a state hospital and the establishment of a four year medical course. The members of this committee are: Drs. R. M. Funkhouser, St. Louis, Chairman; W. H. Brewer, St. James; F. G. Nifong, Columbia.

MISSOURI has one physician for every 575 persons. The ratio in St. Louis is one to every 450, while in Kansas City the ratio is one physician to every 350 persons. In the United States the ratio is one physician to every 750 persons. Over 70 per cent. of the counties in Missouri are without hospitals, there being only one hospital bed for every 432 persons throughout the state. In St. Louis there is a bed for every 171 persons. Ninety per cent. of the hospital beds are centered in St. Louis, Kansas City and St. Joseph. According to these figures, which have been prepared by Dr. Guy L. Noyes, Dean of the School of Medicine of the State University, 60 per cent. of the people in Missouri have difficult access to only one-tenth of the beds in our hospitals.

DR. I. D. KRAUSS of the United States Public Health Service Hospital, at St. Louis, has been appointed director of the bureau of child hygiene of the state board of health. This bureau was established several years ago through the co-operation of the United States Public Health Service and Dr. C. P. Knight was detailed by the Service to act as director. Under Dr. Knight's guidance the bureau has grown to be one of the most effective divisions of the state board of health and was supported at the last session of the legislature with an appropriation that enables the board

of health to conduct the bureau under its own auspices. Dr. Knight has been released from service in the bureau and transferred to another field. Dr. Krauss assumed charge of the work July 1.

THE proposed public health institute which the U. S. Public Health Service contemplated holding in Washington, D. C., during the fall of 1921 has been indefinitely postponed. This action has been decided upon after several conferences between officers of the Service and officers of the American Public Health Association.

The Fiftieth Annual Meeting of the American Public Health Association is to be held in New York City, November 14-18, 1921. Several other activities are planned by the Association in connection with their semi-centennial meeting in November, 1921, and it was at the request of the American Public Health Association that the Service institute for next fall was abandoned.

The Service hopes that it will be possible to arrange to hold a similar institute in Washington during the spring or fall of 1922.

AN aeroplane was pressed into service during the campaign on the referendum on the medical college bill. The fourteenth congressional district was short several hundred names with only a very few hours remaining of the time allowed for filing the petitions, so the aeroplane was sent from St. Louis to Poplar Bluff to take the petitions which had been obtained in that neighborhood to Jefferson City in time for filing. The trip was made without incident and the petitions arrived in ample time to be filed with the secretary of state. It was necessary to obtain five per cent. of the votes cast at the last general election from at least eleven of the sixteen congressional districts and petitions were filed from the following districts: first, fourth, fifth, eighth, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth, fifteenth.

THE friends of Dr. C. Lester Hall of Kansas City will be deeply grieved to know that he sustained a fracture of the arm and leg on June 23, the result of a fall from the front porch of his home. He was taken to St. Joseph's Hospital and it was reported that his condition was not serious. The news of his injury will bring a pang of sorrow to the numerous admirers of "Lester" Hall. Born seventy-six years ago in Saline County, he has spent fifty-four years in ministering to the needs of the sick and afflicted, and throughout his busy professional life he has rarely failed to attend the annual meetings of our As-

sociation. He has contributed numerous papers on the progress of the science of medicine, the fruits of his experience, and actively engaged with wise counsel and personal service in extending the influence of the organization to raise the standards of medical practice and medical education in Missouri.

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

The Abbott Laboratories: Saligenin.

Armour & Co.: Suprarenalin Base, Suprarenalin Ointment.

E. Billhuber: Santyl Capsules.

The Calco Chemical Co.: Amidopyrine-Calco.

Hynson, Westcott & Dunning: Tablets Mercurochrome 220-Soluble.

H. A. Metz Laboratories: Orthoform.

Winthrop Chemical Co.: Mesotan.

Nonproprietary Articles: Amidopyrine.

The Gilliland Laboratories: Acne Mixed Vaccine-Gilliland.

Hoffmann-LaRoche Chemical Works: Pituglandol.

Lederle Antitoxin Laboratories: Cholera Vaccine (Prophylactic)-Lederle, Plague Vaccine (Prophylactic)-Lederle.

H. A. Metz Laboratories: Silver Salvarsan, 0.05 gm. ampules, 0.1 gm. ampules, 0.15 gm. ampules, 0.2 gm. ampules, 0.25 gm. ampules, 0.3 gm. ampules.

Seydel Manufacturing Co.: Guaiacol Benzoate-Seydel.

A POST-GRADUATE program on obstetrics for district medical societies in the southwest is proposed by Dr. Geo. C. Mosher of Kansas City, a member of the Council on Medical Education of the Association and chairman of the Section on Obstetrics, Southern Medical Association. The first session was held at a recent meeting of the North Missouri Medical Society at Brookfield. Papers covering some of the principal points in obstetrics were given by specialists and a forum held with a half dozen other topics proposed for general discussion after the set program. The program follows:

Management of Normal Labor, by Dr. Francis E. Wilhelm; McDonald and Ahlfeld Measurements in Pregnancy and Their Interpretation, by Dr. Geo. F. Pendleton; Toxemia and Eclampsia, the Nightmare of Obstetrics, by Dr. Geo. C. Mosher; Treatment of the Posterior Occiput, Mechanical Delay in Labor, by Dr. Buford G. Hamilton; Some Red Lights in Obstetrics—Danger Signals by the Way, by Dr. C. A. Ritter; Inflammation of the Eyes of the New-Born—Modern Methods of Manage-

ment, by Dr. A. W. McAlester, Jr.; Immediate Repair of the Perineum, the Anatomical Technique, by Dr. Howard Hill.

Forum of general discussion, limited to five minutes, on: Dr. M. Irving Potter's version. Indications for Cesarean section. Use and abuse of pituitrin. Scopolamin in the light of experience. Treatment of post partum hemorrhage. The third stage of labor.

It is hoped that the success of the plan may be sufficient to stimulate similar intensive work in district meetings throughout the southwest.

THE 24th annual meeting of the Medical Library Association, whose membership includes all of the larger medical libraries of the country and a large number of individual members consisting of those interested in furthering medical library work was held in Boston June 6, 7, 8, 1921. In addition to the address of the president the program contained the report of a committee on Standard Classification, and the system used in the Boston Medical Library, and this as explained by the chairman, Mr. James F. Ballard, was adopted as being the most practical solution for meeting the perplexing problems of classification. This was followed by a discussion on Reference Aids, which was opened by Mrs. Grace W. Myers, of the Treadwell Library of the Massachusetts General Hospital. An evening meeting, which was largely attended, was addressed by the president, Dr. John W. Farlow of the Boston Medical Library. This was followed by an interesting paper, illustrated by lantern slides, by Dr. George S. Huntington of New York City, entitled: "Some Historical Facts Concerning the Catoptron of Johannes Remmelinus, and the Superimposed Anatomical Plate During the Early Part of the 17th Century." Following this Dr. Malcolm Storer, of Boston, read a paper entitled: "Interesting Medical Medals." Visits were made to the various libraries in Boston. Of particular interest was an exhibit of rare medical items from the library of Dr. Edward C. Streeter of Boston, spread in the exhibition room of the Boston Public Library. The exhibit was specifically epidemiological, the essential literature on fevers, from Hippocrates to Lancisi, with a few sections such as plague, syphilis, venesection superadded. The permanent headquarters of the Medical Library Association are in the Medical and Chirurgical Faculty Building, at 1211 Cathedral Street, Baltimore, Maryland.

Gov. HYDE has appointed the non-partisan board of control consisting of six members, three Republicans and three Democrats, to manage the eleemosynary institutions under a

new law passed by the last General Assembly. It is expected that this readjustment of the management of the institutions will prevent political influence from affecting the appointment of superintendents and employes and make the tenure of medical officers depend upon professional ability and adaptability to the work. The new board displaces six independent boards of five members each. The institutions affected are: State Hospital No. 1 at Fulton, State Hospital No. 2 at St. Joseph, State Hospital No. 3 at Nevada, State Hospital No. 4 at Farmington, State Sanatorium for Incipient Tuberculosis at Mt. Vernon, and the Colony for the Feeble-Minded at Marshall. The following were appointed on the new board: H. D. Evans of Bonne Terre, a banker and member of the Republican State Committee; W. C. Pierce of Maryville, banker, a member of the board of managers of State Hospital No. 2, and Charles Rendlin of Hannibal, Republicans; Frank Farlow of Webb City, formerly chairman of the Jasper County Democratic Committee; R. M. White of Mexico, newspaper publisher, a member of the board of managers of State Hospital No. 1, and Arthur Fitzsimmons, a St. Louis lawyer, Democrats. Evans' and Farlow's terms expire June 19, 1924, Pierce's and White's terms expire June 19, 1923, and Rendlin's and Fitzsimmons' terms expire June 19, 1922.

PERSONAL responsibility for the transmission of venereal disease has now been upheld in several different phases by both civil and criminal courts, says the U. S. Public Health Service. In Oklahoma a man has been sentenced to five years in the penitentiary for infecting a girl with syphilis. In Nebraska the court upheld a doctor who warned a hotel keeper that one of his patients, a guest at the hotel, had syphilis and had refused treatment and was consequently a menace to the public health. In North Carolina a woman has been awarded \$10,000 damages against her husband for a similar infection and the Supreme Court has upheld the judgment.

The Nebraska case is important because it asserts that a physician's duty to protect the public health may, under certain circumstances, transcend his duty to hold his patient's confidence inviolable. The North Carolina case is also important because it sets aside in this particular case the legal barrier that prevents a wife from testifying against her husband and bringing suit against him.

All three cases are valuable in counteracting incorrect statements often made that the venereal-disease law falls almost exclusively on women and lets men go free. State laws of course govern in all such cases, but the fact

that every state in the Union has now adopted many if not all of the venereal-disease laws gives ground for expecting similar action in other states. Certainly the wide dissemination of the three decisions should go far to curb diseased persons who deliberately expose others to infection.

DR. FREDERICK L. HOFFMAN, vice-president and statistician of the Prudential Insurance Company, sailed on June 1, for South America. He is one of a party of scientific explorers sent out by the Mulford Biological Laboratories and the Prudential Insurance Company of America for the principal purpose of seeking new drugs and botanical specimens useful for pharmaceutical science.

The expedition is under the direction of Dr. Rusby, Dean of the School of Pharmacy of Columbia University. Other members of the party will be concerned with the facts of natural history, botany and entomology, and with certain topographical and geographical investigations.

The starting point of the expedition will be La Paz, and thence by way of Pungo and mule track to Asunto on the Rio Bopi. The journey then is by raft down the Rio Beni, passing Santa Anna to Rurrenbaque, from here the route will be through the practically unknown Yacuma country, seeking a connection between Lake Rogagua and Lake Roguagado. The exact location of these lakes has not been geographically determined. From the last named lake the route is to the Mamore River a comparatively short distance below the junction with the Itenes, which at Villa Bella enters the Madeira. Here is a railway connection to avoid the rapids of the Madeira, facilitating steamer transportation on the Amazon at Porto Velho. From that point the party by steamer will go to Manaos where it will divide. Dr. Rusby and his associates, by the Rio Negro, will go north into Colombia by way of Bogota, terminating their journey probably at Barranquilla. Dr. Hoffman will give some time to the region about Manaos possibly including the upper Amazon and part of the Rio Negro before proceeding to Para, whence he expects to sail for home toward the end of the year.

Of particular interest will be the collection of information on the subject of tropical diseases, tropical sanitation, tropical agriculture in its relation to health, and the broader question of tropical acclimatization. He will have the co-operation of diplomatic and consular representatives of the governments of the countries to be visited, of medical and surgical men throughout the region and of business men. Instrumental observations will be

made of blood pressure and the effect of altitude changes, while it is hoped that some new material may be collected regarding the anthropometry and anthropology of native races.

MEMBERSHIP CHANGES, JUNE

NEW MEMBERS

Blount, H. J., Potosi.
 Borghoff, John A., 3427 Washington Ave., St. Louis.
 Camp, George H., 5123 Westminster Pl., St. Louis.
 Cheney, Ralph Edwin, 3933 S. Broadway, St. Louis.
 Ferris, Joseph L., City Hospital, St. Louis.
 Finnigen, Frank R., 3701 Westminster Pl., St. Louis.
 Funsch, Edwin C., 3867 De Tonty St., St. Louis.
 Gaebe, Harold C., City Hospital, St. Louis.
 Gay, Lee P., Barnes Hospital, St. Louis.
 German, Walter A., 3933 S. Broadway, St. Louis.
 Gianotti, Ernest F., City Hospital, St. Louis.
 Goeke, Joseph F., St. John's Hospital, St. Louis.
 Kirkwood, Elmer E., Moberly.
 Kramer, Arthur E., Bloomsdale.
 Monaghan, Willis A., City Hospital, St. Louis.
 O'Malley, Eugene J., City Hospital, St. Louis.
 Pritchett, Paul L., Webb City.
 Schuck, Philip, 1703 S. Grand Ave., St. Louis.
 Shores, Earl M., St. Joseph.
 Sievers, Edward F., 4548a McMillan Ave., St. Louis.
 Smith, Merrill N., Fayette.
 Smith, Warner, Holland.
 Thomas, Charles S., 1703 S. Grand Ave., St. Louis.
 Thompson, Arthur M., City Hospital, St. Louis.
 Tyzzer, Robert N., Lister Bldg., St. Louis.
 Tyzzer, Walter G., Lister Bldg., St. Louis

CHANGE OF ADDRESS

Aufderheide, Frederick, Drake, to Centertown.
 Bacon, M. M., 23 E. 13th St., Kansas City, to 3733 Highland Ave.
 Bennett, Floyd W., 2815 Park Ave., St. Louis, to 4035 Flad Ave.
 Bothman, Louis, University Club Bldg., St. Louis, to 639 University Parkway, Chicago, Ill.
 Callaway, G. D., 212½ McDaniel Ave., Springfield, to 716-18 Landers Bldg.

Caplan, Leo, Lister Bldg., to 606 Carleton Bldg., St. Louis.

Cohen, Frank, 2905 Troost Ave., Kansas City, to Illinois State Bank Bldg., Quincy, Ill.
 Davies, Leroy W., 808 Hickory St., to 4042 No. 11th St., St. Louis.

Davis, Wm. L., Address Unknown, to Nelligh, Neb.

Doyle, J. M., 645 W. 8th St., St. Joseph, to 810 N. 24th St.

Edler, William, New Orleans, La., to 707 Equitable Bldg., St. Louis.

Fredericks, E. L., 417 Prospect Blvd., Kansas City, to Manchester.

Glenn, J. E., Washington, D. C., to 958 Arcade Bldg., St. Louis.

Graham, John A., Argyle Bldg., Kansas City, to 206 McMillen Bldg.

Hall, Clark H., Nevada, to State University Hospital, Oklahoma City, Okla.

Jones, K. P., 513 Commerce Bldg., Kansas City, to 402 McMillen Bldg.

Koch, George L., 520 Chambers Bldg., Kansas City, to 304 McMillen Bldg.

Lewald, James, 4019 Botanical Ave., St. Louis, to 5400 Arsenal St.

McDonald, Park, 113 S. Rialto Bldg., Kansas City, to Bright Bldg.

O'Neill, John R., City Hospital, to 3618 Lafayette Ave., St. Louis.

O'Reilly, Archer, 403 Metropolitan Bldg., to 3534 Washington Blvd., St. Louis.

Owen, L. J., 3427 Washington Ave., to 407 Funke Bldg., Lincoln, Neb.

Pickard, M. W., 603 Bryant Bldg., Kansas City, to Union Station Hospital.

Schaller, F., 2242 Indiana Ave., St. Louis, to 2353 S. Broadway.

Schnoebelen, P. C., 923 University Club Bldg., St. Louis, to Humboldt Bldg.

Stein, W. F., Cisi, Ill., to Fresno, Calif.

Summa, H. H., 4236a Florissant Ave., to 232 Flagler Ave., West Palm Beach, Fla.

Tucker, C. A., 200 W. Commercial St., Springfield, to 624 Landers Bldg.

Wheeler, H., 4121a Lafayette Ave., St. Louis, to 1402 S. Grand Ave.

Willis, John B., Ferrelview, to Loan Jack.

NO LONGER MEMBERS

Clark, T. Ross, Carnegie, Okla.
 Cook, Fred M., 816 6th St., Laurel, Miss.
 Dean, Wm. T., 5675 Waterman Ave., St. Louis.
 Feigenbaum, Gerson, San Antonio, Texas.
 Halley, Claude D., Shawnee, Okla.
 Karabasneff, Christ I., Madison, Ill.
 Munson, Chas. L., Address Unknown.
 Murphy, Edw. S., Humboldt Bldg., St. Louis.
 Noll, Edwin A., Address Unknown.
 Reinders, Otto W., East St. Louis, Ill.

Stadtherr, Anthony L., Address Unknown.
 Williamson, Howard M., Oliv, Iowa.
 Young, John Smith, Dry Fork, Ky.
 Ogilvie, Roy K., East Prairie.
 Boehm, Joseph L., 540 Park Ave., New
 York City.
 Miller, E. M., Mound City.
 Slocumb, L. H., Ft. Smith, Ark.

MISCELLANY

CONFERENCE MISSOURI HEALTH OFFICERS Columbia, June 20-21, 1921

The meeting of the Missouri Health Officers' Conference was opened by Dr. Guy L. Noyes who presented Vice President J. C. Jones of the University. Professor Jones delivered an address of welcome, assuring the conference that he and his co-workers appreciated the presence of the members and that it was the intention of the University to direct the activities of the institution at all times for the public good, and that they were alive to the necessity of promoting the activities of the medical profession and public health.

Dr. M. P. Ravenel was called to the chair to preside.

The first address of the program was presented by Dr. Geo. H. Jones, Director of the Department of Health Service, Southwestern Division, American Red Cross, subject "American Red Cross Co-operation with the Administrative and Other Health Agencies." He pointed out that health today as never before is recognized as a state and national responsibility, and that the state of the public health is reflected in the degree of personal and national efficiency. To insure health promotion, public opinion must be developed to the point of appreciation, which requires health education that the administrative health agencies do not have at their command. They can be supplied at this time only by the volunteer health agencies of which the Red Cross is probably the largest with nearly twenty-four million adult and junior members distributed in every city and village in the United States, and which through their present organization would be able to assist in carrying on the real missionary work by co-operating in the same program as adopted by the health departments in their various jurisdictions.

Dr. G. C. Eggers, Health Officer for St. Louis County, presented the legal phases of the present health laws regarding the duties of the deputy state commissioner of health, explaining the various contingencies which have arisen in the operation of the new health statutes, and giving suggestions for securing proper interpretations, making it evident that the constitutionality of the laws and validity of the state board of health regulations should be determined as early as possible.

Dr. R. L. Russell, Director of the Division of Venereal Diseases, discussed "The Venereal Program Up to Date." He outlined the progress made in venereal disease control during the past two years which indicated the assistance accorded by the medical profession, the druggists and public in general.

Dr. C. P. Knight, Director of the Division of Child Hygiene, read a very interesting paper on "Physical Defects and Communicable Diseases Among Children," in which he stated that many epidemics can be traced to lack of proper care in school districts; that in former years the closing of schools was considered the proper way to overcome an epidemic, but this closing is no longer considered necessary

when the health of the children is safeguarded by regular inspection. Each child should be studied and handled with a view to its individual needs, and should receive a periodic examination and treatment for defects disclosed. Close co-operation between the school and the public health nurse is essential for successful public health work. Also, the expense of a community nurse should be assumed by the county as a just obligation, rather than to expect the Red Cross as at present to supply a nurse for such public service.

Dr. Thomas Parran of the United States Public Health Service and Director of the State Bureau of Rural Sanitation, discussed rural sanitation, showing the necessity for such activity, the methods of procedure, and briefly outlining the plans of the health department for conducting the work upon a co-operative basis by which state aid secured from outside sources and local county contributions will be used to carry out the program adopted.

Miss Mance Taylor, Assistant Professor of Nursing, University of Missouri, spoke on nursing training in the county hospitals as influenced by recent legislation, giving some very valuable information about the present status of nursing, the legal state registration, present training and the effect to be expected upon such training as the result of building county hospitals.

Mr. H. H. Banks, President of the Boone County Hospital Board, presented a proposal to create a County Hospital Association, relating some of the experiences in building the Boone County Hospital, the plans for operation, and, inasmuch as this is more or less pioneer work in the state, he offered information to those inquiring from other districts.

Dr. Frank G. Nifong, Columbia, discussed "The State General Hospital Project," showing how such an institution may well be conducted for the benefit of the public and at the same time be of immense value in educating and maintaining the morale of the medical profession. Such a hospital would make possible the operation of a complete medical school in connection with the State University and would place a medical education within reach of all.

Dr. Guy L. Noyes, Dean of the School of Medicine, in his paper entitled "The School of Medicine and the Hospitals," showed that there were but five states in the Union that have a greater number of physicians in ratio to the population than has Missouri. Unfortunately however in Missouri as in other states these physicians are not properly distributed. It is believed that this faulty distribution is due largely to the distribution of hospitals. Missouri has one doctor for every five hundred seventy-five persons. The statistics for the United States show one physician for every seven hundred fifty. The ratio in St. Louis is one to every four hundred fifty while in Kansas City it is one to every three hundred fifty. Over seventy per cent. of the counties in the state are without hospitals. The ratio for Missouri is one hospital bed for every four hundred thirty-one people. The ratio for the United States is one bed for every three hundred forty people. In St. Louis it is one to one hundred seventy-one, and we find that in Kansas City, St. Louis and St. Joseph ninety per cent. of such hospital beds are centered. In other words sixty per cent. of our population have difficult access to only ten per cent. of the beds—to state it differently, two-fifths of our people have access to only one-tenth of our beds. This unequal distribution makes it necessary that new hospitals be erected where needed. One should be in every county and the conditions in Missouri are favorable, since every county is given legal right to erect and maintain a hospital.

Dr. Emmett P. North, President of the State

Board of Health, described the functions of the state board of health as being the granting of licenses for practicing medicine and public health administration, the efficiency of which has been greatly increased since the passage of new health laws in 1919. Dr. North commented on the co-operation of the deputy state health officers, stating that only through them was the undertaking possible. The Red Cross work in the state was strongly commended as being one of the most important features in the developing of public sentiment in behalf of thorough health control.

Dr. Cortez F. Enloe, State Commissioner of Health, expressed especial interest in the work for rural sanitation and declared the board intended to stimulate this work. He brought a personal message from Governor Hyde who was unable to attend to the effect that the governor was personally interested in seeing established in our State University a thorough and complete school of medicine, and that he was exceedingly interested in the health and welfare of the state. Dr. Enloe expressed the belief that the state board of health does not possess the laws or authority that many state boards have, such as the dental and barber boards, but every effort would be made to administer the laws as written and to carry on the work from its present state of development. By mutual co-operation between the board and health officers only can success be attained.

Dr. John A. Ferrell, Director of the International Health Board for the United States, told of the work this board was doing, the methods of work with states in demonstrating malaria control and in the development of county health organization. He stressed the necessity of quality of work rather than quantity; also that it is essential that health workers must be selected for their qualifications rather than to supply patronage, if the work undertaken is to be a success.

Dr. Lunsford D. Fricks, of the United States Public Health Service, in discussing malaria control, told of the malarial conditions existing in the South, and which to some degree exist in a small area of south-east Missouri. The annual loss from malaria in life and efficiency cannot be computed. Commercial activities, the promotion of agriculture and drainage are fast having the desired effect upon the prevalence of the disease in some sections. With good roads, further drainage, and concentrated efforts, there is no reason why malaria cannot be properly controlled. To date, the control projects undertaken have been chiefly in cities or towns on account of the great expense incurred, but only county-wide campaigns conducted in connection with competent health administration can be expected to eradicate the disease. Dr. Fricks further stated that the administration of quinine to the inhabitants of malaria infected districts to cure both the acute illness and carriers of the disease, is a very important part of the control; likewise the use of the top minnow which seems to have a selective appetite for the malarial eggs and larvae.

Miss Alma Wretling, Red Cross Supervising Nurse for Missouri and Director of the State Board of Health Division of Nursing, spoke upon the public health nurse. Only a year and a half ago there were only three of these Red Cross public health nurses in the state. Now the Red Cross alone has thirty-five and the demand for them cannot be filled. They are accomplishing a great work in the schools and with the public generally in co-operation with health officers. This type of nursing is new and it will take some special training and time to supply the demand.

Dr. D. H. Dolley, Professor of Pathology, Uni-

versity of Missouri, discussed the subject of shock, introducing a very interesting line of reasoning and showing the differences in the stimuli involved and other causes in producing this condition.

Dr. W. A. McAlester, formerly State Commissioner of Health, gave a most inspiring illustrated talk upon "How, When and Where Should Public Health Be Taught." He dwelt upon the necessity of teaching health to the school children as the only sure, and the quickest, method of producing a health educated public. The health officers are urged to take up this method of illustrated health talks to the school children.

Drs. C. W. Green and Dan G. Stine of the Medical Department of the State University, presented most interestingly the laboratory and clinical aspects of hyperthyroidism, taking into account some of the changes of theory about the thyroid glands in more recent years.

Dr. M. P. Ravenel, Director of the Public Health Laboratory, spoke on the present status of the public health laboratory, giving many practical points and inviting physicians to patronize the Department of Preventive Medicine Laboratory. Every effort will be made to meet the demand for examinations and Wassermann tests which are made free for any indigent patient. Antityphoid vaccine is furnished from this laboratory free of charge to any physician.

Dr. Ralph McBurney, Assistant Director of the Laboratory, demonstrated the Wassermann test with an interesting explanation of the various complicating agencies.

Tuesday noon all members and guests were entertained at a luncheon at the Boone Tavern, being guests of the University. A most enjoyable hour was spent. Dean Jones presided, making a few appropriate remarks and calling upon Dr. Ferrell who spoke very interestingly upon "Public Service."

Forty-eight members and guests were present.

DISAPPOINTMENTS OF ENDOCRINOLOGY

A recent issue of *The Journal*¹ contains a caution lest, in the current enthusiasm for so-called endocrinology, medicine become humiliated by the drift toward a sort of pseudoscience bolstered up with meaningless words and unfounded assumptions. It is time for the medical profession to face the facts squarely. We shall not deny the great advances that have been made in comparatively few years in the study of thyroid function. Much of the knowledge gained either by scientific research or by clinical observation has "made good" through direct application in practical therapy. Changes in thyroid function may lead to symptoms that are fairly definite, determinable, clinical entities. Therapeutic success attests the value of much that has been accomplished and the verity of a few of the assertions that are taught.

As much cannot be said for the suprarenal structures. G. N. Stewart of the Western Reserve Medical School at Cleveland deserves the thanks of the medical profession for the fearless and critical manner in which he has questioned much of the verbal rubbish that goes under the designation of the endocrinology of the suprarenals. In a trenchant review he² has gone even farther in pointing out the invalidity of some of the experimental evidence that has been marshaled to support pet theories. One postulate stands unchallenged, namely, that the loss of the suprarenals is incompatible with life. Hence the conclusion is inevitable that these structures con-

1. The Endocrine Glands—A Caution, editorial, J. A. M. A., 76:1500 (May 28) 1921.

2. Stewart, G. N.: Adrenal Insufficiency, *Endocrinology*, 5:283 (May), 1921.

tribute something indispensable to the functioning of the body.

What, then, is "suprarenal insufficiency?" To this question no one has yet given a satisfactory answer. The symptoms attending decline and death after extirpation of the suprarenals are not specific or constant; indeed, they are duplicated by the outcome of various other abnormal states in which no "endocrine" disorder is assumed. The essential manifestations of the loss of the suprarenals remain obscure. Why shall we continue to postulate a condition which cannot be diagnosed even under the most favorable circumstances?

The first answer to any query about the suprarenals is likely to involve the function of epinephrin, the well defined chemical compound that is usually present in the medullary portions and can somehow be discharged into the circulation. The pharmacologic potency of this product cannot be denied. It was natural that attention should be directed promptly to the possibility that epinephrin is the primary active principle, the physiologic hormone of the suprarenals. Is "suprarenal insufficiency" represented, then, by interference with the output of epinephrin? This can scarcely be the case, for animals continue in health after extirpation of one suprarenal and denervation of the other, a procedure after which no detectable amount of epinephrin is liberated. The assertion that epinephrin is at least secreted in physiologic emergencies has been reviewed in *The Journal*³ with the conclusion of "not proven." The assumption that it serves to maintain the tonus of the blood vessels and the normal blood pressure has likewise proved to be untenable. Injected epinephrin has a definite pharmacologic action on the circulation; so have drugs not even remotely associated with animal tissues. Neither class necessarily represents a normal stimulus because it happens to have demonstrable effects when introduced in the body. No one alleges that the alkaloids, powerful though they are, have a known physiologic function in plants.

Furthermore, although epinephrin is a component of the suprarenal medulla, it is the cortex of the suprarenal structures that appears to be the vitally important portion. If one argues for the "fetish of suprarenal insufficiency," it can scarcely be associated with the hormone epinephrin; for, as Stewart points out, the experimental evidence has tended more and more to show that the cortex is the part of the suprarenal indispensable for life. It is the cortical tissue which alone, or at any rate most conspicuously, undergoes compensatory hyperplasia when a deficiency is created by removal of a considerable part of the suprarenal tissue. The accessory suprarenal tissue, which also undergoes hypertrophy under these circumstances, and which is usually supposed to be responsible for the survival of those animals that do not succumb to the loss of both suprarenals, consists entirely of cortex. Only the cortical tissue can be successfully grafted.

Even in Addison's disease there is no experimental basis for the assumption that the defects of suprarenal function are due to a loss of epinephrin function. How much, then, can be implied in the vague "hypoadrenal" states of clinical literature. There is something stinging, yet deserved in its implied rebuke, in the words of Stewart.² "On the whole," he says, "it must be granted that hitherto the attempts made to evoke in animals a well marked syndrome characteristic of adrenal deficiency have been singularly disappointing. The contrast is great when we leave this desert, where the physiologists and experimental pathologists have wandered, striking many rocks but finding few springs, and pass

into the exuberant land of clinical endocrinology, flowing with blandest milk and honey almost suspiciously sweet."

How much longer will our profession continue to merit such criticism? Just so long as our profession continues to give serious consideration to pseudoscientific rubbish promulgated by the exploiters of organic extracts.—*Jour. A. M. A.*, June 11, 1921.

SYNOPSIS OF THE NEW NURSE PRACTICE ACT

The new law regulating nursing in Missouri, which became effective June 20, makes it obligatory for nurses to comply with certain provisions that are new to them and to physicians and differs materially from the old law. For these reasons we have prepared this synopsis for the information of our members, and it is very important that all nurses should study the law because it lays upon them certain obligations and establishes a time limit when these obligations may be fulfilled without penalty. The synopsis was prepared by Miss Sarah E. Parsons, 4009 Lindell Blvd., St. Louis, who is Educational Director for the Board of Nurse Examiners and who will be glad to give further information concerning the law to all who may write to her.

Outstanding Features of the Act

1. Compulsory registration of all persons who care for the sick for hire after December 31, 1921, in communities of 30,000 or over.
2. The creation of the licensed attendant (L. A.).
3. Appointment of an educational director of schools for nurses and attendants.
4. Educational standard of nurses to be raised to high school or its equivalent during the next four years.

Synopsis of Law

1. The Board of Examiners consists of five nurses appointed by the governor.
2. The board appoints an educational director who acts as chief examiner and inspector of all schools for nurses and attendants.
3. The board decides what shall be taught in the schools or hospitals for nurses and for attendants.
4. The board will register all schools from which nurses or attendants apply for examination, fee \$15 annually.
5. The board will each year send to every nurse and every attendant a list of all licensed nurses and attendants in the state.
6. The educational director will visit schools for nurses and for attendants; advise with the heads of the schools and with the board as to what shall be taught in these schools.
7. All who care for the sick for hire must be licensed, either as nurses or as attendants, except (a) those who are members of a religious organization and who practice under its tenets (as Christian Scientists); (b) those who are attendants in the eleemosynary institutions of the state and of cities of 300,000 inhabitants or more; (c) when the state board of health proclaims an emergency (as in influenza epidemic), persons may practice without a license during the emergency period only.
8. Nurses who are now registered in the state must fill out form 9161-2a before January 1, 1922 (cost \$1), or take another examination. (Blanks will be supplied on application to Miss Sarah E. Parsons, 4009 Lindell Blvd., St. Louis.)
9. Nurses who are registered in other states but not in Missouri must apply to the board before January 1, 1922, for a license; fee \$15.
10. Nurses who are not registered anywhere but submit to the board satisfactory evidence of being

3. Is Epinephrin Indispensable to Life? Editorial, *J. A. M. A.* 73:192 (July 19), 1919; The Debated Theories of Suprarenal Function, *ibid.* 74:326 (January 31,) 1920.

graduates of schools recognized by the board, may become licensed under the waiver if they apply before January 1, 1922. Fee, \$15.

11. All nurses must re-register each year, on blanks sent to them in May, to be returned to the board with \$1 by July 1. By September 1 the board will issue a certificate of re-registration.

12. All licenses must be registered by the county clerk of the county in which the nurse or attendant lives.

13. Nurses not living in the state, and those not graduates of a school in Missouri, whose qualifications are satisfactory, may register under the waiver before January 1, 1922, fee \$15.

14. Upon graduation a nurse may secure a temporary license, good for six months, permitting her to practice until the next examination; fee \$5.

15. Nurses failing in examination may not have extension of temporary license.

16. Any person who does not meet the requirement as licensed nurse must, in order to practice after January 1, 1922, become licensed as attendants, except (a) as stated in No. 7 (exceptions to the requirement for license); (b) nursing or caring for the sick without pay.

Attendants and Practical Nurses

1. Attendants and practical nurses may become licensed under the waiver before January 1, 1922, by making application to the board and being recommended by three persons, including a licensed physician, a registered nurse, and a patient, fee \$10.

2. In small towns and rural districts (communities of 30,000 or less), persons may practice nursing for hire by securing a certificate from a licensed and practicing physician.

3. After January 1, 1922, persons may become licensed as attendants after examination who are 19 years of age, have common school education, good character, and have completed a course in nursing, including at least six months in a hospital or sanatorium registered with the board.

4. The licensed nurse shall have the title of R. N.; the licensed attendant shall have the title of L. A.

Applicants Entering Training Schools

5. Preliminary education of applicants for entering nurses' schools:

(a) After July 1, 1922, applicant must have one year's credit in high school, or its equivalent.

(b) After July 1, 1923, applicant must have two years' credit, or its equivalent.

(c) After July 1, 1924, must have three years' credit, or its equivalent.

(d) After July 1, 1925, must have four years' credit, or its equivalent.

6. Training must be in a school approved by the board, giving at least two years' training, with theory and practice satisfactory to the board.

Results Hoped For

1. That nursing schools shall develop a uniform minimum standard of reasonable excellence, consisting of intensive preliminary instruction, for a shorter or longer time according to the size and condition of the school, of well balanced theory and practice in general medical cases, general surgical cases, obstetrics, pediatrics, operating room work, and on invalid and scientific diets.

2. That uniformly trained attendants will in time supplant the untrained practical nurse.

3. That professional nursing may become generally recognized as an honorable occupation worthy of the best type of young womanhood.

4. That imposters under the guise of trained nurses may cease to flourish in Missouri.

5. That statistics as to the nursing resources in the state may at all times be available.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-Sixth Meeting, Monday, February 14, 1921

1. EXHIBITION OF CASES.

A. A CASE OF TREATED HODGKIN'S DISEASE.—By DR. E. W. A. OCHSNER.

I wish to present a case of Hodgkin's disease with marked general pigmentation giving a history of having taken arsenic and having X-ray exposures. In the summer of 1919 the patient who is 28 years old and married noticed several small masses in the right anterior triangle of the neck. Was diagnosed "tuberculous" by physicians who gave seven injections "mixed infection vaccine." October, 1919, went to Public Health Service in this city. At this same time noticed skin was getting dry associated with intense pruritus. Was told that his skin was pigmented. Gland was excised and diagnosis of Hodgkin's disease made in the Washington University Pathological Department.

Began Fowler's M. j. t. i. d. increasing M. j. t. i. d. until M. x were taken and then down in the same manner. Had two courses at this time, another in February, 1920, and a fourth in November, 1920.

In June, 1920, went to the Denver Public Health Service where he received six X-ray exposures about the neck and axillae, three over the chest and one over both groins. Glands in the neck and axilla decreased in size while those in the groins remained stationary. In October, 1920, developed a very troublesome cough, which has persisted. Went to the Mayo Clinic January, 1921, where he had eight radium treatments and fourteen X-ray treatments to neck, chest, axilla, abdomen and groins. Free from cough for two months. All glands decreased in size except those in the groins.

Now patient has a few small glands on both sides of neck, one the size of a pigeon egg in the left axilla and one the size of a goose egg in each groin, and indefinite mass in the abdomen. Temperature varies between normal and 100.5 degrees. Blood pressure 125/68, r. b. c. 3,100,000, w. b. c. 7,100, Hb. 60 per cent. Differential: Lymphocytes 3 per cent. Large mononuclears and transitionals 3 per cent.

polymorphonuclears 92 per cent., polymorpho-eosinophiles 1 per cent., mast cells 1 per cent. Sugar tolerance is slightly decreased.

There is slight delayed reaction to Goetsch and adrenalin test.

DISCUSSION

Dr. Singer: I saw this patient a year ago at the Public Health Hospital. He was not pigmented as seen today. The question at the time was whether he had tuberculosis. He had a cough and mediastinal gland infection but there was no definite tuberculosis. I suggested that one of the glands be removed for diagnosis. The Public Health Hospital had no pathologist competent to make a diagnosis at that time—men were not available. Dr. Burrows made the diagnosis for me and reported Hodgkin's disease.

Dr. Burrows: I remember this case. It was rather an interesting gland. The diagnosis of Hodgkin's disease was quite definite on account of the eosinophiles and large endothelial cells. We thought it was a chronic or slowly progressive type of Hodgkin's disease.

2. THE ANALYSIS OF FIVE HUNDRED NEUROPSYCHIATRIC CASES AS SEEN IN ROUTINE DISPENSARY AND HOSPITAL EXAMINATIONS.—

By DR. GROVES B. SMITH.

In this study of five hundred neuropsychiatric cases the Yerkes Bridges Point Scale was used to determine the value of routine mental examinations in the diagnosis and treatment of patients attending the Washington University Dispensary and those in Barnes Hospital. Form boards and association tests were used in conjunction with this examination.

The deductions based upon this study were as follows:

(1) The tests lend themselves readily to a graphic portrayal of personality defects for teaching and demonstration purposes.

(2) When properly interpreted and evaluated one examination may be compared with future re-examinations to show the amount and nature of the retardation, deterioration or improvement of any case.

(3) The interpretation and analysis of the individual elements that go to make up the personality based upon these tests when studied in the light of the developmental history as regards school, home and society, or the various normal or abnormal conduct and behavior reactions gives a much more valuable insight into the nature and cause of the mental state than can be obtained through casual questioning.

(4) Mental tests unless interpreted in the light of medical and sociological findings are useless in psychiatric studies.

(5) The mental age level is of little value after the 12 year limit, and in all cases gives no actual indication as to the personality of the person, for persons with the same mental age level may have exactly the opposite memory, judgment, conduct and behavior reactions.

(6) The greater the deviation from the normal the more probable the mental state is the result of organic brain disease.

(7) There is greater scattering in a mental ability among the psychotic cases than is found among the normal if compared to the reactions of a mental age level of twelve years.

(8) Psychoneurotic and hysterical cases tend to read their own difficulties into the reactions especially those of association tests, so that definite

diagnostic and therapeutic help can be gotten from tests No. (7), (13), (19).

(9) A blocking of association reactions is found in psychoneurotic and dementia praecox cases, showing that behavior plays a definite part in the formation of these mental states entirely independent of any organic change.

(10) Excessively high scores with peculiar answers in persons with a "shut in" type of personality should make one watch the case for the development of a psychosis of a type allied to dementia praecox. This is very true of children.

(11) The mathematical deductions are the least trustworthy feature of the tests, for the highest score possible in that all questions were answered perfectly, were passed by one normal person, one acute syphilitic meningitis and the other a delinquent girl who had only gone to the third grade in school.

DISCUSSION

Dr. Schwab: Dr. Smith's work in the clinic and wards of the Barnes and Children's Hospitals has been of great importance. Dr. Smith has taken a formal test and made it alive and has given to us a useful method of getting data of importance in arriving at a diagnosis. I do not know of any work that is being done in our clinic which is of greater service than this work of Dr. Smith's. In many instances the diagnoses made in the wards of the hospital after very complete study of the case is paralleled by the diagnostic conclusion arrived at by the studies of conduct anomalies which Dr. Smith has been able to obtain through this method of analyzing the reactions to the series of tests which are given. As far as I know there is no clinic that at the present time has the advantage of such an analysis. Every case that comes to the clinic has been tested in this way. The number of cases has now grown to be very large. After a while we are planning to make such tests upon not only all cases in the neurological department but in a number of cases in other clinics and then to carry on these tests among groups of people outside of the hospital, so that we will be able to arrive at some sort of conclusion as to the intelligence and behavior reactions of a series of individuals who seek medical advice in the Washington University Dispensary.

The value of Dr. Smith's work can be especially seen in obscure mental cases, especially those in which the clinical findings and laboratory findings are not sufficiently clear to conclude the diagnosis. For example—in a case of suspected paresis where the defects in memory and judgment are observed in the ordinary routine examination, the same findings are capable of being more or less clearly measured and analyzed out from the results obtained in Dr. Smith's examination. The curves that Dr. Smith demonstrated here tonight are very satisfactory and we have learned to rely upon them to bolster up the diagnosis at which we finally arrive. These curves are really based upon behavior analysis. Therefore, it has been possible through his work to add to the clinical and laboratory findings a group of facts which have a direct diagnostic significance and less and less are we compelled to rely on impressions and accounts given by others or such things as cannot be measured or analyzed out. Dr. Smith has added a great deal of definite evidence towards the understanding of obscure neurological cases.

3. THE DWARF TAPEWORM: INTER-MEDIARY HOST.—By DR. ALFRED GOLDMAN.

The first cases of dwarf tapeworm in the region of St. Louis are reported. *Hymenolepis nana* was

found in seven of eight colored children in one family living in St. Louis for three years, but originally coming from Mississippi. The oldest child, twelve years of age, who was free of tapeworm, had an *Ascaris* infection. The mother had pin worms, the father was free of intestinal parasites. The youngest child in the series was a year and a half old.

Four of the children had definite symptoms attributable to the *Hymenolepis nana*. These included abdominal pain or tenderness, diarrhoea, anemia, vertigo and headache. Eosinophilia ranged from 6 to 9 per cent. in the cases with symptoms, and 2 to 3 per cent. in the symptomless ones. The infection was difficult to cure. Three cases were treated but none cured; case receiving four courses of treatment. One year after first seeing the cases the parasites were still present in all.

The mode of infection is still unknown as no intermediary host has been demonstrated. In lieu of this it has been suggested that man himself may be the intermediary host. In favor of this view are the following points: The occurrence of multiple infections in the same household, as in the author's cases; the difficulty of getting rid of the parasite; the demonstration by Grassi that the dwarf tapeworm of rats, which is very similar to that found in man, has its cysticercus stage in the rat itself, a cercocyst being formed in the dilated central cavity of the intestinal villus.

Incubation of the tapeworm eggs by the author yielded negative results. Feeding of eggs to rats and mice were also negative. No rats were found in the B. family's home, which, however, was in a very unhygienic condition.

After the fourth administration of the vermifuge to Case 1, a number of mucoid-looking tags of tissue were found in the stool each of which contained from two to eight heads of *Hymenolepis nana* studded throughout, but no segments.

Microscopically there were observed the rostellum, a row of hooklets, four suckers and a small caudal appendage. Completely surrounding each head could be seen both in the stained and unstained specimens a definite sac-like structure. The shape varied, some being spherical, others ovoid, still others elliptical. No nuclei were demonstrated in these "sacs." The author thought that these might represent the cysticercus stage of *Hymenolepis nana*, thus indicating that man himself may be the intermediary host.

DISCUSSION

Dr. Opie: It is very surprising to learn that *Hymenolepis nana* is the most common tapeworm in the southern states. Dr. Goldman has suggested that the cysticercus stage exists in the human host of the adult worm and this is certainly true of the dwarf tapeworm of the rat, of which the cysticercus occupies the intestinal villus. There is some analogy in the *Taenia solium*, for it may produce auto-infection and man may harbor the cysticercus stage.

4. (a) THE COMPLEMENT FIXATION TEST IN TUBERCULOSIS.—By Mr. J. ZAZAYA.

The material for this work was obtained from the Chest Clinic of the Washington University Dispensary; we examined sera from one hundred unselected patients. After the complement fixation test was done, these patients were divided in several groups according to the diagnosis.

All cases of acute pulmonary tuberculosis, tuberculous lymphadenitis, and tuberculosis of bone gave a positive reaction excepting one of the cases with bone tuberculosis. The tuberculous suspects or those who gave the typical subjective symptoms of

tuberculosis but in whom the physical findings were negative gave a positive reaction. Those with chronic pulmonary tuberculosis which was probably clinically inactive, gave a negative reaction. The rest of the patients who did not fit in any of the above groups and who after an examination were not considered as having active tuberculosis gave a negative reaction.

An interesting finding in the study of these groups was the large percentage (81 per cent.) in which we noted a one or a two plus inhibition and the small percentage (19 per cent. giving a three or a four plus inhibition. These weak positive reactions were repeated and if found to agree on previous findings were considered as true positives.

The Bordet-Wassermann reaction was performed on the same sera to determine the percentage of syphilis among these groups and principally to determine the prevalence of syphilis among the tuberculous. Thirteen out of the hundred cases gave a syphilitic fixation reaction and of these three gave positive reactions with the tuberculosis complement fixation reaction. It is of interest to notice that the tuberculous antibodies are not fixed by the antigen used in the syphilitic fixation, nor is the syphilitic antibody fixed by the tubercle bacilli antigen.

The complement fixation test for tuberculosis, we believe when positive means active tuberculous infection, but when negative does not exclude the presence of infection with the tubercle bacilli for in some advanced cases there is an absence of antibodies to perceptibly fix the complement.

The complement fixation test may be positive in infections with the closely allied group of acid fast bacilli.

(b) THE COMPLEMENT FIXATION TEST IN TUBERCULOSIS.—By Dr. J. J. SINGER.

In a series of one hundred cases examined by the complement fixation test for tuberculosis, the following results were found: Thirty-seven positives gave 100 per cent. positive reaction; three cases of tuberculous suspects gave three positives or 100 per cent.; three cases of tuberculous lymphadenitis gave three or 100 per cent. positives; four cases of tuberculosis of the bone gave three positive and one negative, that is 75 per cent. positive and 25 per cent. negative; forty-nine non-tubercular lesions gave a negative reaction.

In explaining this unusual and almost perfect serum reaction, it must be understood that even the very weak reactions were considered positive but only after a second test was made; 43.5 gave a one plus reaction; 36.96 two plus; 8.69 three plus; 10.85 four plus. It was noticed that the three and four plus cases were the ones that were most clinically active, while the one and two plus cases were considered only occasionally active.

The value of the complement fixation test in the diagnosis of active pulmonary tuberculosis is still in the experimental stage. We are not yet able to interpret its true value; however, in our experience, the positive test is just so much more weight added to other clinical tests, and we feel justified in the use of the test as a routine measure in the complete examination of tuberculosis cases.

DISCUSSION

Dr. Chesney: I should like to ask if any of these reactions were repeated? Any frank worker in serology will admit that you cannot have Wassermann reactions run regularly from week to week because you deal with at least two variable reagents—guinea pig's serum and sheep cells. If these one plus reactions hold from week to week on the same pa-

tient then they should have more significance, but if they do not it is conceivable that they may represent variations in technic.

Dr. Cooke: The interpretation of the weakly positive or "one plus" reactions is of considerable interest. It seems certain that in some cases of pathologically active tuberculosis there is such a low concentration of fixing antibodies in the blood that the complement fixation test is negative or only weakly positive. A certain percentage of individuals without clinical evidence of tuberculous infection, however, give weakly positive reactions, possibly due to some hidden focus that gives no symptoms or signs. When one tests cases from a tuberculous clinic where many cases are tuberculosis suspects, a larger number of positive and weakly positive reactions would be expected and, therefore, a close agreement between the result of the test and the clinical diagnosis. In a series of cases from a general clinic, the positive reactions not infrequently occur in patients in whom tuberculosis is not suspected clinically. In general such positive reactions, even though weak, have the same significance—a pathologically active tuberculous focus from which antigen reaches the circulation. I have titrated the concentration of fixing body in a considerable number of serums from tuberculosis patients and the results indicate that the percentage giving weakly positive reactions is relatively small. A weakly positive fixation test unsupported by other evidence of tuberculous disease does not necessarily indicate an infection that needs treatment. It is unusual to get an exact agreement between the results of the fixation test and the clinical diagnosis even in a relatively small series of cases on account of the difficulty of recognizing clinically certain obscure tuberculous foci that may not give symptoms.

Mr. Zazaya: The one plus were always repeated. These were non-tuberculous, sometimes indicating positive and sometimes not.

Dr. Singer, closing: Wassermann tests, tuberculosis tests or any other tests are really based on other than clinical tests. The important thing is that we are glad to get the blood once. It would be much more valuable if we could repeat the test in these cases. A few of these cases are also in the original series of cases. Mr. Zazaya did not analyze these. It is the patient that is the variable factor; when you find four plus T. B. fixation, always look out for active tuberculosis.

CHARITON COUNTY MEDICAL SOCIETY

The Chariton County Medical Society met in Dr. Brummall's office at Salisbury, June 2, 1921. In the absence of the president Dr. G. W. Hawkins called the meeting to order, the following being present: O. T. Morey, J. F. Welch, H. Gray, W. O. Hawkins, M. L. White, B. Stokes and G. W. Hawkins. The minutes of the meeting of December 9, 1920, were read and approved.

A motion was made and carried to raise the dues to \$6.00 per year to conform with the requirements of the State Association.

Resolutions regarding the referendum, offered by Dr. Brummall, were read and unanimously adopted, as follows:

"Whereas, The medical profession of the State of Missouri heartily approve and endorse the present administration in its every effort to raise the standard of general education to the position it should have, and

"Whereas, We also stand for the same high standard in the medical profession, and our standing at the present time in requirements for the practice of medicine in Missouri is fourth

in the states and we have reciprocity with thirty states in the Union, but if Senate Bill No. 433 as passed by the Fifty-first General Assembly goth into effect our standing will be lowered until only one state (Wyoming) will have a lower requirement than Missouri, and thereby do away with all reciprocity and we will become the dumping ground for all low grade applicants from other states, and

"Whereas, Our state board will be divested of all power, and as all who fail to pass our state board may have their examination reviewed by the Circuit Court and thereby make an added expense to the state; therefore be it

"Resolved, That we the members of the Chariton County Medical Society most heartily endorse the efforts of the Missouri Public Health League in referendum of Senate Bill No. 433, and verily believe that when it is referred it should be defeated by the people, and be it further

"Resolved, As the defeat of this bill is for the best interest of humanity and especially of the women and children, and is a non-partisan matter, we request the papers of the county to publish these resolutions, and we request all the people of the county to aid us in preventing this bill from becoming effective, and especially do we request the ladies' clubs and societies to assist us in this matter."

The Society then entered into a short discussion of the talking or sleeping disease.

Doctors Hawkins and Stokes were selected to read papers at our next regular meeting.

Dr. Brummall was elected reporter and requested to report this meeting to the State Journal.

J. D. BRUMMALL, M.D., Secretary.

PEMISCOT COUNTY MEDICAL SOCIETY

The Pemiscot County Medical Society met in the new Commercial Club rooms, Caruthersville, Tuesday, June 7, at 2 p. m., with Dr. W. H. Denton in the chair and the following members present: Drs. Phipps, Hudgins, Collins, Farris, W. H. Denton, Johnson, and Cooper.

Dr. M. H. Hudgins read an interesting paper on "Electricity in Regard to Medicine," which brought forth quite a bit of discussion and was appreciated by all present.

Dr. J. B. Lutten, delegate to the State Association meeting, told of the interesting meeting and from his report it must have been a success.

Dr. Warner Smith, of Holland, Mo., was elected to membership.

The president appointed a committee consisting of Drs. Phipps, Collins, Brannon and himself, to make arrangements for our annual outing to be held June 22.

Slight discussion was made in regard to our fees but they were left as they stand at present.

The meeting was one of the best we have had in some time and with better attendance our meetings would be a success.

L. E. COOPER, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session in the office of Dr. B. B. Potter, at Lancaster, on Friday, May 13, with the following members and visitors present: Drs. W. F. Justice, B. B. Potter, W. A. Potter, J. H. Keller, A. J. Drake, W. H. Zieber, O. P. Farington, members, and Dr. Johnson of Greentop, visitor.

The meeting was called to order by Dr. W. F. Justice, President, at 2 p. m. The minutes of the last meeting were not read on account of the absence of the secretary, he being sick.

The subject for discussion being "Tonsillitis," Dr. W. A. Potter read a very interesting paper on the subject and it was discussed at length, after which Dr. Potter demonstrated the Sluder method of tonsillectomy by a clinic. The work was done under local anesthesia and was very interesting and the operation was a success.

The next meeting will be held at Lancaster, July 15. Papers will be read by Drs. W. H. Zieber, O. P. Farington and J. B. Bridges. There will be a banquet in the evening for the members and their wives. Committee on refreshments: Drs. A. J. Drake, J. H. Keller, and B. B. Potter.

A. J. DRAKE, M.D., Acting Secretary.

SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society held its regular quarterly meeting in the office of Dr. C. D. Harris, Morley, July 12. The following were present: Drs. W. H. Wescoat, C. D. Harris, Sylvester Doggett, G. W. Trisler, W. S. Hutton, G. S. Cannon, H. V. Ashley and E. J. Nienstedt. The meeting was called to order by Dr. W. H. Wescoat.

Dr. G. W. H. Presnell, Sikeston, was elected a member of the Society.

Dr. W. S. Hutton reported cases of ilocolitis.

Dr. W. H. Wescoat reported a case of encephalitis lethargica.

Dr. Sylvester Doggett reported a case of multiple pregnancy.

Dr. Harris reported a case of uterine hemorrhage treated with adrenalin chloride.

Refreshments were furnished by Dr. Harris.

Oran was selected as the next place of meeting.

E. J. NIENSTEDT, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the St. Louis County Medical Society was held at the residence of Dr. A. W. Westrup, Big Bend Road, Webster Groves, June 8, at 2:30 p. m. The members were most delightfully entertained and a very interesting program was enjoyed.

Dr. Marshall Baker read a paper on "The Use of the Obstetric Forcep," and a general discussion of the subject followed. Dr. A. G. Pohlman of the faculty of St. Louis University Medical School addressed the meeting on the referendum petition.

Delicious refreshments were served and a pleasant social time was enjoyed by the following members: Drs. A. W. Westrup, Marshall Baker, Arthur Conway, W. R. North, Armstrong, H. Miles, Goodrich, Corley, Cape, Martin, Trumpour, Reynolds, Blanchard, Dunnivant, O'Malley, Pritchard, Brosard, Knabb, Pohlman.

W. F. O'MALLEY, M.D., Secretary.

THE PETTIS COUNTY MEDICAL SOCIETY
Meeting of January 17, 1921

The Society met in regular session at the Public Library, Sedalia, the meeting being called to order by the president, Dr. M. T. Collins. After discussion of some minor business matters the election of officers was declared in order and the following were nominated and elected for the ensuing year: President, W. E. Bess; vice president, F. B. Long; secretary, W. G. Jones; treasurer, A. E. Monroe; dele-

gate, A. J. Campbell, two years; censor, three years, M. T. Collins.

By vote the annual dues were raised from four to five dollars.

Meeting of February 7

Resolutions drawn by Attorney R. S. Robertson in regard to the non-passage of a bill now before the legislature, known as House Bill No. 385, which if passed would prevent physicians, surgeons and dentists from organizing mutual insurance companies to protect them from malpractice suits, were adopted.

The program committee, Drs. A. J. Campbell and D. P. Dyer, was appointed to serve for six months and the committee was instructed to secure outside talent on the program for each meeting.

Meeting of February 21

Motion made and unanimously carried that resolutions be sent our Representative and Senator at Jefferson City, requesting the defeat of certain bills now pending before the legislature which we deem detrimental to the medical profession and community at large.

Dr. George H. Jones of St. Louis, who is interested in the Red Cross public health service, was present and laid before the Society a partial outline of his work which would be more fully discussed at some future date.

Dr. Archie L. Walters made application for membership and was accepted as a member of this Society.

Meeting of March 7

After the regular routine of business was dispensed with, Dr. William W. Duke of Kansas City was introduced and gave a very able lecture on "Allergy and Anaphylaxis."

The remainder of the evening was taken up in discussing Dr. Duke's paper.

Meeting of March 21

The regular order of business was dispensed with and Dr. William Engelbach of St. Louis gave a lecture and slide demonstration of the ductless gland secretions, showing the effect these diseased glands have on the body growth.

Meeting of April 4

Dr. W. K. Trimble of Kansas City was present and read a paper with case history, entitled "Primary and Secondary Syphilis; Symptoms and Treatment."

Dr. M. P. Krall, also of Kansas City, gave a paper entitled "Cardiac Arythmia" with slide demonstrations. Each of these papers was instructive and showed that it took a great deal of thought and time to prepare them.

Meeting of April 18

Dr. James G. Montgomery of Kansas City read a paper on "Plural Effusions" followed by lantern slide demonstrations.

Dr. J. N. Jackson of Kansas City gave a lecture on "Cancer of the Breast" and the surgical procedure. Quite a lengthy discussion was held on both subjects.

An abstract of the minutes of the General Hospital Board meeting giving Pettis County Medical Society the privilege of conducting a clinic at the hospital, was read. After some discussion, motion was made and carried that the chairman appoint a committee of three to make complete arrangements for conducting a clinic, arranging the staff, etc.

Committee appointed: W. G. Jones, M. P. Shy, W. E. Bess.

Meeting of May 2

Dr. J. L. McDermot of Kansas City gave a lecture on "Roentgenological Interpolation of Diseases of Bones and Joints."

Dr. C. B. Francisco of Kansas City gave a lecture on "Orthopedics."

Meeting of May 16

Dr. Frank R. Teachenor of Kansas City gave a lecture on "Brain Injury."

Dr. Theodore H. Aschman of Kansas City gave a lecture on "Eclampsia Treatment" and a case report.

Meeting of May 30

Dr. W. T. Coughlin of St. John's Hospital, St. Louis, gave a lecture on "Root Section Under Local Anesthesia and Trigeminal Neuralgia."

Dr. W. H. Vogt of St. Louis gave a lecture entitled "Consideration of Some of the Methods for Estimating the Maturity of Fetus in Utero and the Interruption of Pregnancy Term."

All the papers and lectures were freely and extensively discussed. A vote of thanks and appreciation was given to each of the visitors and an invitation was extended to visit our city and Society at any time in the future.

Our Society is very proud of the progress made so far this year under the guidance of our president, W. E. Bess, and the very efficient program committee, Drs. A. J. Campbell and D. P. Dyer. Most of our meetings were preceded by dinners and social sessions.

The meetings were adjourned to take up the regular work the first Monday in October.

W. G. JONES, M.D., Secretary.

BOOK REVIEWS

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1920. Cloth. Price, postpaid, \$1.00. Pp. 72. Chicago: American Medical Association, 1921.

While New and Nonofficial Remedies 1921 contains the proprietary and unofficial remedies which the Council found worthy, the Annual Reports for 1920 contain, in the main, reports on products which were examined and found wanting, and on preparations which though contained in the 1920 edition of New and Nonofficial Remedies, had to be omitted from the 1921 edition.

Many of the reports make profitable and at the same time most interesting reading. They are of interest, not so much as regards the product with which a report deals, but because of the insight which they give of the methods used in the exploitation of proprietary medicines.

The following is quoted from a report which explains the dismissal of electrargol, a colloidal silver preparation, from New and Nonofficial Remedies, because the manufacturer was found to be making unwarranted therapeutic claims for it. This illustrates the arguments which the Council must combat and the thorough way in which it is done:

"They (the arguments advanced by the manufacturer to justify the claims to which the Council had objected) consist largely in citing 'authorities' for particular statements which are accurate enough in themselves, but to which objection was raised

because of the manner in which they were used which resulted in unjustifiable deductions. In part, the arguments supported the point of view that a manufacturer is not responsible for quotations that he takes from the medical literature, but that the whole responsibility rests first on the author of the paper, and then on the reader who accepts it. As Comar and Cie (the manufacturers of electrargol) put it, 'It is impossible for us to admit that there is anything in this action that would deceive an instructed reader, such as a physician is *a priori*.' The Council has on every suitable occasion emphasized that this naive attitude is as untenable as it would be for the disseminator of a slander to unload his responsibility on his informer or on his hearer. When manufacturers undertake to supply physicians with information regarding the actions and uses of their products, they thereby assume responsibility for the statements they make.

"Otherwise, the most dangerous as well as the most absurd claims and statements could and would be justified under the cloak of editorial immunity."

Other reports contain equally illuminating phases of the proprietary propaganda which the Council is contending, and with which every physician should be familiar.

MANUAL OF OPERATIVE SURGERY. By John Fairbairn Binnie, A.M., C.M. (Aberdeen), F.A.C.S. Surgeon to the Christian Church Hospital, The Research and the General Hospitals, Kansas City, Mo.; Fellow of the American Surgical Association; Membre De Societe Internationale De Chirurgie. Eighth Edition, revised and enlarged, with 1,628 illustrations, a number of which are printed in colors. P. Blakiston's Son & Co., Philadelphia. Price, \$12.00 net.

The eighth revised and enlarged edition of Binnie's Operative Surgery maintains for this well-known and always well received volume the same high standards that all the previous editions have enjoyed. The author has quite rightly dropped from his text the article on "War Surgery," and in its place has incorporated the established facts in the different chapters to which they belong.

The reader is permitted throughout to make his own selections of the method for treating many conditions where there is a just element of doubt as to the most desirable one, and does not have forced upon him the favorite methods of the writer. This is well illustrated in the discussion on empyema of the thorax, where the views of both sides are freely presented and discussed.

In the chapter on the abdomen, a very careful consideration is given to the important subject of the surgery of the large bowel. One would be glad to see more in regard to the present status of the surgery of gastric and duodenal ulcers, but possibly this is excusable in a volume devoted primarily to operative technique.

The surgery of the genitourinary tract remains the same and seems to have more space devoted to it than a book on general operative surgery would justify.

The chapter on plastic surgery has been entirely rewritten and made a more serious monogram on reconstruction, taken in great part from war experiences. A great many new illustrations have been added to this part of the text. Localization of foreign bodies by the roentgen ray has been added.

On the whole the volume may be said that it continues to hold its place as one of the very best texts on operative surgery for the student and a most satisfactory ready reference for the surgeon.

M. W. M.

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., SEPTEMBER, 1921.

NUMBER 9

E. J. GOODWIN, M. D., EDITOR
3529 Pine St., ST. LOUIS, MO.

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S. P. CHILD, M. D.
M. A. BLISS, M. D.

ORIGINAL ARTICLES

INTERNAL PODALIC VERSION*

IN SELECTED CASES

LEE DORSETT, M.D., F.A.C.S.

ST. LOUIS

While the subject here presented is by no means a new one, it is one that has been greatly neglected by the profession. I am sure that we should be greatly indebted to Dr. Irwin W. Potter of Buffalo for bringing his method of delivery before us, and for his simple yet wonderful technique. It was after spending a few days with Dr. Potter last fall that I was impressed by the ease with which this operation can be performed. While not quite agreeing with him in its application to every case, I am sure it can be used much more often than we are now using it and many of its principles can be used in normal vertex deliveries and in breech extraction.

In my private work and on the Obstetrical Service at the St. Louis City Hospital, it has been my privilege to see a rather large number of pathological labors, and I have been impressed with the fact that a great many of the mothers could have been saved hours of suffering and the deaths of a number of children prevented, had version been performed. As I said before, I can't as yet agree that version should be performed in every case, yet it cannot be denied that Dr. Potter did 900 versions out of 1,100 cases last year, with a fetal mortality of 3.2 per cent. and a maternal mortality of nil.

I think I am fair in stating that there are a number of cesarean sections done that should never have been attempted and that they are considered more from a surgical standpoint than from an obstetrical one. While cesareans are easy and spectacular operations, the after-

results of this operation are not always as satisfactory as one could want. I am personally acquainted with a number of such operations that were done for what was termed a "contracted pelvis" where no pelvic measurements were ever made.

I think few of us realize the after-effects upon a woman who has gone through a prolonged and protracted labor, causing as it does post-partum hemorrhage, eclampsia and sepsis and such serious after-effects as chronic subinvolution, chronic metritis and chronic adnexitis.

While Potter gives as his reason for doing a version in every case, the elimination of the second stage of labor, I am sure that while this may be a mooted point, there are a certain group of cases where this operation is undoubtedly indicated, namely—in certain malpositions of the fetus, such as occiput posterior, transverse, brow, face and parietal presentations, in backward displacements of the arm, and in prolapse of the arm, leg and cord. (Of course it is understood that a podalic version would not be attempted in a markedly contracted pelvis, or where there is a marked disproportion between fetus and maternal pelvis.) In certain cases of ante-partum hemorrhages, in a moderately flattened pelvis, and when a delivery should be hastened in the interest of mother or child or both, version is indicated.

As a contraindication I might mention that version should not be attempted in a small, round pelvis or in a flattened pelvis with a conjugate less than three and one-half inches.

The difficulty in doing a correct internal podalic version is not encountered in the actual procedure of turning the child, but in the extraction of the arms and after-coming head. Potter's technique is excellently applied also in doing a breech extraction in a breech presentation and I no longer fear this position as formerly, and can see no excuse for an external version. I have had some ten breech presentations within the last few

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

months and was surprised at the ease with which the shoulders and head were extracted when the proper procedures were used. The old and threadbare adage is immediately flung at the obstetrician, why turn the child when nature intended it to be born vertex first; cannot this be said of forceps delivery, and yet how many times are forceps used to hasten delivery so that the physician may terminate a long and tiresome wait. It is a little known obstetrical fact that an aftercoming head can often be delivered where, if coming in a vertex position, it would not come through the pelvis. Why is this possible? Because a wedge-shaped, aftercoming head will pass through more easily base first; the parietal bones overlap more readily with the aftercoming head, and the pressure tends to flatten them and to lessen their curve so that they approach one another at a less obtuse angle and to make the vertical measurements of the skull greatest and the transverse diameter less.

With these introductory remarks I will give briefly the technique I was so fortunate as to witness last fall as a guest of Dr. Potter, and the technique that I am now using in my own work. Before starting this operation there are a few words of caution I wish to give:

1. Make a careful pelvic measurement and measurement of the fetal head.
2. Make a correct diagnosis of the position and presentation of the fetus and the location of the placenta.
3. Be sure that both bladder and rectum are emptied.
4. Do not attempt a version unless the cervix is effaced and the os is dilated or dilatable.

TECHNIQUE

1. The patient is placed on as high a table as is obtainable and anesthetized with chloroform.

2. The patient is then drawn down on the table until the buttocks are just over the edge of the table (in a modified Walcher position), the feet are lowered and are either held by two assistants or placed on two chairs. The vulva, perineum and adjacent parts are washed with soap and lysol solution or bichloride. The bladder is completely emptied.

3. The hand (preferably the left) is introduced into the vagina, and a goodly amount of liquid soap is poured into the vagina over the depressed perineum. The vagina is then dilated by a process of "ironing out;" this consists of a downward motion of the hand over the vaginal floor, palm down, beginning posteriorly and drawing forward. This process should take from five to ten minutes.

4. After the vagina is well relaxed, the hand and arm of the operator (long rubber gloves should be worn) is well lubricated with soap. The hand in the form of a cone then enters the os and if it is not fully dilated, it is gradually stretched. Then hand and arm enter the uterine cavity pushing the head into the iliac fossae, and passing upward. If the membranes are unruptured they are gently separated from the uterine wall, as the hand moves up into the uterus. At this point care should be used to avoid the placenta. When the feet are located, the hand is forced through the membranes (high up) and both feet are grasped. (It is absolutely essential that the foot be differentiated from a hand and this is easily done by the feel of the heel.) By steady traction downward on the feet and, if necessary, an upward pressure of the other hand of the operator on the abdomen of the woman, forcing upward and outward the fetal head, the feet are delivered, and when they are out of the vagina as far as the knees, the turning of the child is completed. With gentle traction, the hands being over the pelvis of the child, the trunk is delivered, the back of the child being always upward, it now lies transversely to the pelvic outlet. The whole process should be done with great deliberation, as up to this point there is absolutely no need of haste. When the trunk is delivered, the anesthetic should be stopped, so as to allow the uterus to contract, and thus aid in the flexion of the head. When the trunk is exposed, it should be wrapped in a warm, sterile towel to prevent stimulation and thus cause the child to gasp and aspirate any fluids.

5. With the body of the child in this position, it is given a half turn (the direction depending upon which diameter the head enters the pelvis) and the body drawn downward and backward until the edge of scapula is under symphysis. The anterior shoulder is then delivered, the body rotated again until the posterior shoulder is anterior, and this is then delivered.

6. With the child astride the palm surface of the forearm, one or two fingers are introduced into the mouth and gentle traction made to flex the head. With slight pressure with the operator's other hand over the occiput of the child through the mother's abdominal wall flexion is promoted and the head slowly delivered until the mouth is out of the vagina; at this point the child is held and any mucus "milked" from the trachea, and the perineum allowed to dilate. There is no haste now, as the child generally gasps spontaneously. When the mucus is freed from the trachea, the further delivery of the head is proceeded with. The child is then laid over the abdomen of its mother and will in a minute or two begin to

breathe spontaneously. When the cord ceases to pulsate, it is cut, and 1 c.c. of pituitrin is given before the placenta is delivered.

At no time during the delivery is any attention paid to the cord. It is often prolapsed but does not interfere with the delivery, nor is there any danger to it.

Conclusions.—In internal podalic version, when performed by the Potter method, there is:

1. Less shock to the mother.
2. No birth injuries to the child.
3. Little or no injuries to the maternal soft parts.

565 University Club Building.

THE PROBLEM OF POSTERIOR POSITIONS*

BUFORD G. HAMILTON, M.D.

KANSAS CITY, MO.

The prevailing opinion, that 90 per cent of all posterior positions will rotate anteriorly if left to force of labor is probably true, but two conditions have arisen that make waiting almost impossible: (1) the demands of the public that long labors be not only shortened but accompanied with less pain; (2) the modern woman.

The demands of the public have been met by the following methods: (1) Twilight sleep, (2) nitrous oxide oxygen, (3) early version eliminating the second stage of labor, (4) as soon as the cervix is dilated, the use of forceps with an episiotomy, (5) other mechanical interferences.

In the second condition, the modern woman, because of habits, clothing, food economic conditions, automobile and modern conveniences, has become a different physiological and anatomical individual. Physiological with a highly developed nervous system, with less endurance, making it impossible to wait for from 24 to 60 hours, as in former years. As to anatomical change there may be a difference of opinion, but from our own observations and reports from the various obstetrical centers in the last twenty years the statistics have been completely changed. We were taught that 85 to 90 per cent. of all cases occupied the L. O. A. position and that the other 10 or 15 per cent. represented all other positions. Today the reports from clinics show as in the report of Potter, as high as 60 to 70 per cent. In our own experience posterior positions are present in 50 per cent. of our cases. It is said by some that men of today make better diagnoses. This we cannot believe since our old masters had not only the same chance

for observation but we believe were just as accurate.

Those who have followed the writings of the orthopedists and have applied their suggestions must be surprised in the measurements of women who have followed business vocations and those who have not. It is interesting to compare the measurements and planes of women wearing high heel shoes, and measurements of the same women without shoes. One has only to measure from the symphysis to the floor and from the center of the promontory to the floor, with and without high heel shoes to appreciate the marked difference. It is also of interest to measure from the anterior superior spine to the internal malleolus and from the anterior superior spine to the center of the symphysis on the two sides. Changes are often met with which if followed seem to influence labor and probably position. In discussing shoes with manufacturers, retailers and salesmen, we find that most girls and women buy shoes for style and not for fit. Using the language of several salesmen, "few women are properly fitted." Again, in discussing corsets with heads of departments we find that tailored corsets are expensive and that most women buy by number, not by the fit.

Eliza Mosher in a series of four thousand young women measured each one for abdominal and pelvic capacity. The first two thousand were stenographers, show and factory girls whose vacation and habits would indicate a change in their anatomical makeup, and the second two thousand were young women whose occupation and habits should in no way influence their anatomical makeup. The comparison showed a marked variation in the shape of the abdomen, pelvis and a marked difference in the abdominal viscera.

Cook, in discussing the balance of the body, found variations on the two sides of the individual improperly shod, and states that the strain on certain groups of muscles against the lack of use on the opposite side would produce an anatomical change if long continued.

Merrill has shown that continually standing on one foot not only tilts the pelvis forward but will produce lordosis and scoliosis and also states that if long continued either condition may become permanent.

Goldthwaite suggests the following classification:

(1) The herbivorous type or the short heavy set individual with thick transverse processes and short thick muscles with little pelvic motion.

(2) The carnivorous type or the tall slender individual with short thin transverse processes and long thin muscles with increased motion in the lumbo-sacral and iliosacral joints.

*Read at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

(3) The intermediate class explains itself. He also shows that there is motion in the iliosacral articulation and that it is influenced by external forces, size of the articulation and size and tone of the muscles and ligaments that form the joint.

That there is motion in the iliosacral articulation and that it is a true joint is proven by Dwight of Harvard who examined twenty pelvises and found motion in nineteen. In each case the pelvis was nailed down and motion still determined.

Goldthwaite in discussing corsets has shown that tight or improper fitting corsets will not only change the contour of the chest and abdomen but will change their contents. All are familiar with the teachings of the pediatricians as to the influence of gastro-intestinal disease and food disturbances upon the developing individual; also focal infection long continued and their effects upon the development and resistance of the individual.

May we not then draw the following conclusions:

(1) That because of the large number of women in the business world and because of the imperfect fitting high-heel shoe and corsets the modern woman has undergone an anatomical change.

(2) That the planes and measurements of the pelvis have undergone a change and that in many cases the abdominal capacity has so changed the axis of the pregnant uterus as to prevent descent before the onset of labor.

(3) The lack of descent has been caused by a change in the relation of the diameters of the pelvis to the diameters of the head of the infant, thus producing posterior positions.

(4) That the normal concavity of the uterus and pelvis posteriorly is so changed as to favor extension, thus causing rotation posteriorly before the head is fixed in the pelvis.

(5) That with the onset of labor the force of the pains is directed toward the anterior abdominal wall rather than in the axis of the pelvis, causing extension and favoring rotation to the posterior position. Statistics might be given to prove an anatomical change as a cause of posterior positions but since statistics are often misleading, we would suggest measurements and observation along these lines as a proof of the theory just mentioned.

The successful termination of each case depends upon several factors: (1) On the history of the patient; (2) whether the patient is a primipara or multipara; (3) diagnosis of position and the position of fetal heart-beat; (4) whether the long diameter of the head is above the brim, above the tuberosities or below the tuberosities; (5) whether bregmo-occipital or fronto-occipital; (6) upon the size of the pelvis and babe.

The latter may be determined by measurements of Ahlfeld and McDonald with the usual pelvic measurements. In this connection it must be taken into consideration that in anterior positions the sub-occipito bregmatal diameter 9.5 cm. enters the oblique diameter 12.75 cm. and since in anterior positions the greatest diameter of the head is in front of its center and further since the axis of the uterus and pelvis is concave behind, flexion is favored. In posterior positions the fronto-occipital diameter 10.5 enters the oblique 12.75, the greatest diameter of the head being behind its center. Extension of both back and head of the babe being favored. Still further being influenced by the lack of engagement before the onset of labor which is so common in posterior positions. This can be demonstrated as suggested by Herman by placing the fetal skull in the brim of the pelvis in the anterior position when it will be seen that the biparietal diameter is in oblique diameter and that there is plenty of room in the pelvis, while in posterior the biparietal is back of the oblique diameter which limits the room in the pelvis.

(7) The anatomical makeup of the patient using Goldthwaite's classification. The herbivorous type always presents the greatest problem, not only because of the position but without doubt the diameters of the pelvis are lessened by the increased size of the muscles and the excessive amount of fat that is encountered.

(8) The physical endurance and surrounding of the patient.

(9) Length and consistency of the cervix and whether there is scar tissue in the cervix from previous labors or repairs.

(10) Anatomical changes caused from interferences with planes and diameters of the pelvis.

(11) Last, but not least, the care of the patient during the prenatal period.

The question necessarily follows, how shall posterior positions be managed? Several methods have been advocated, among the most common of which are: (1) To wait; (2) twilight sleep; (3) the judicious use of morphin alone or in combination with scopolamin; (4) the use of forceps, with or without episiotomy; (5) versions; (6) cesarean section; (7) mechanical interference.

I think every obstetrician and every physician doing obstetrics will agree that most cases if left to the forces of labor would rotate and terminate favorably or shall we say, if judiciously managed would terminate favorably. Without doubt both statements are true. The old saying: "When in doubt wait," has always been advocated and should always be, but the demands of the public have caused us to modify this saying more than we wish

and I fear more than is for the best interest of the patient's future.

Twilight sleep in some cases is the method of choice but cannot and should not be used as a routine. Morphine alone or in combination with scopolamine, morphine 1/6 to 1/8, scopolamine 1/100 to 1/400 to be repeated as often alone or in combination as the situation demands. This method is sane since it gives rest, quiets the nervous system, regulates the character and frequency of the pains, serves as a preventive of cervical spasm, uterine stricture and in many cases will serve as a cause for a happy termination. One should at all times estimate the number of doses to be given not only from the mother's interest, but that of the babe which may be determined by the fetal heartbeat.

The Use of Forceps.—At no time is visualization more necessary since upon application and traction depends the future not only of the mother but of the babe. When rotation is complete, or almost complete, forceps applied in relation to the sides of the head with traction properly applied is the method of choice, remembering that at no time should forceps be applied until the cervix is completely dilated. When the long axis of the head is in the transverse diameter or when the position is a persistent posterior, forceps in the hands of average operators is a dangerous procedure. Never should the forceps be applied in relation to the pelvis in either of these positions since deep tears are certain to follow and most often is followed by serious injury to the infant. Only those operators whose skill and experience is great should attempt rotation with forceps. And may we emphasize that it is not the method for the novice.

Versions.—When should versions be done? For the average physician I suggest only when the head is above the brim or when there is a prolapsed cord from interference. We are mindful of the work of Potter and would not detract from his success, and while we may "go to scoff and remain to pray," yet for the time being we must maintain that version is a serious procedure and cannot be and should not be universally done especially in primiparas.

Cesarean section is indicated under the following conditions:

1. Babe out of proportion to the pelvis, which is determined by measurements and intelligent test of labor, and probably in some cases where dilation of the cervix either by the force of pains or by mechanical interference is practically impossible. And we may emphasize the necessity of doing rectal examination, in border-line cases or in any case where cesarean section may become the method of choice.

2. Eclampsia, where long labors would be dangerous to mother and babe.

3. Placenta praevia. Where loss of blood and time is a factor.

Mechanical Interference.—DeLee suggests two plans of procedure other than the ones mentioned.

1. The use of the tenaculum to control rotation.

2. Rotation of the head and back with the hand to the anterior position followed with the application of forceps. He also recommends the lateral episiotomy, done early, the depth of the episiotomy depending upon the size of the passage and passenger. We of the West who worship at the shrine of this great teacher cannot but agree, but the point to be remembered is that years of experience has made Dr. DeLee a master and not all can do as Dr. DeLee.

Author's Procedure.—The plan in our experience which has been most successful and simple we present for your worthy consideration, this plan to be used only when interference becomes necessary. The use of the Voorhees bag in those cases where the bag of waters has ruptured prematurely, in fact in all cases where the long diameter is above the tuberosities. A No. 4 Voorhees bag is introduced which we feel shortens labor, softens the cervix and favors rotation. Aside from a prolapsed cord, we do not believe the position can be changed to a more adverse one. Furthermore as is most often the case in posterior positions the axis of the uterus is so changed that the force of the pains is directed toward the anterior surface of the lower uterine segment and cervical spasm and uterine stricture or Bandl's ring is favored. The bag, we believe, prevents this condition by filling up the lower uterine segment, bringing the cervix in the mid-line, allowing the force of the pain to be directed into the correct axis.

For the past four years we have been following this plan, and from a large series of cases with what we consider very good results, we believe it occupies a place in the treatment of posterior positions. Many cases have terminated normally while others have been so assisted that further mechanical interference was made easy. When other mechanical interference becomes necessary we have used the following method of treatment, which is to be used only when it seems impossible for the patient to be delivered under normal conditions. After the cervix has been completely dilated or can be dilated with ease, the patient is anesthetized. In all cases ether is given by a competent anesthetist. The vagina is dilated by introducing two fingers, then three and so on until the entire hand can be introduced with ease. The cervix is dilated if

not already and the head is grasped between the thumb and fingers, it is then pushed back a short distance and rotated to an anterior position, the success of the method depends on not only rotation of the head but that of the body. If there is much difficulty in rotating the body with the head the lower shoulder is grasped between the thumb and fingers and the back is rotated anteriorly. In either case the head should be well flexed. Pressure is then made upon the buttock when the head may be pushed well down into the pelvis. If rotation is properly done the babe does not rotate back to the original position. Forceps are then applied with traction applied along the approved lines. In most cases the head is brought down on the perineum and the forceps removed when with combined pressure on the buttocks above, on the forehead and then on the chin below, labor can be terminated in most cases very satisfactory. With the head on the perineum if the mucous membrane shows damage immediate episiotomy is done.

There seems to be a difference of opinion as to when and where to do an episiotomy. Deep lateral episiotomies anterior to the levators or those involving the levator are done. No doubt either plan makes delivery easier and quicker but we would suggest that only those who are quite familiar with the pelvic floor should do lateral episiotomies and only the best anatomist and gynecologists should ever divide either levator. Before any mechanical interference is done there should be complete dilation of the cervix since traction on the uterosacral and cardinal ligaments may later, even with a perfect pelvic floor, be the cause of prolapsis uteri, a condition that is almost impossible to remedy in young women. It has been our experience that if time is given to thoroughly dilating the vagina and if traction is done slowly along approved lines a large number of women can be delivered with little or no damage.

The author prefers the central episiotomy for the following reasons:

1. It is anatomical.
2. It is rare to have either levator severed, and since separation is the rule, repair in the median line is the method of choice.
3. Often in separating the triangular ligament no damage is done to the levators.
4. Tissues retract equally on the two sides and when brought together one may be certain of symmetry.
5. In all repair work on the pelvic floor there is contraction after the repair and if done in the median line there is a tendency for contraction to take place toward the center in a straight line.

It has been our custom to follow the plan of repair as suggested by Dr. Howard Hill,

which is commonly known as "Hill's anatomical repair of the pelvic floor." Results have been so uniform, that we feel it is the operation of choice.

While the plans just outlined for the management of posterior positions is not original, we believe it so standardizes the method of procedure as to make posterior positions comparatively easy.

May we in conclusion suggest that an anatomical change in women is at the present day an increasing cause of posterior positions, and emphasize the following methods of management, which if followed assures the future health of the individual:

1. The judicious use of morphin alone or combined with scopolamin and if possible to wait.
2. The use of the Voorhees bag when the membranes have been ruptured prematurely and when the long axis of the head is above the tuberosities.
3. Complete dilatation of the cervix before interference.
4. Slow complete dilatation of the vagina.
5. Anterior rotation of the head and trunk with the hand.
6. Application of forceps in relation to the head.
7. Slow traction along approved lines.
8. Central episiotomy when necessary.
9. Cervical repair.
10. Hill's anatomical repair of the pelvic floor. Remembering that no pelvic floor repair is complete before from four to six months.

2 W. 52 St.

RADIUM TREATMENT OF UTERINE CANCER*

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The surgical treatment of cancer of the uterus has been a disappointment. The causes are: (1) Most cases are so far advanced when first seen that it is impossible to remove the entire malignant area. (2) A very high primary mortality accompanies panhysterectomy for malignant disease. (3) Operative trauma may be a factor in the spread of the disease.

An analysis of the curability of cancer of the uterus by surgery was made by Janeway in the September, 1919, issue of *Surgery, Gynecology and Obstetrics*. The article covers a series of 5,027 cases from the standard

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

clinics of America and Europe. A brief summary shows:

1. The operability of cancer of the uterus is 37 per cent.
2. The primary mortality from operation is 18 per cent.
3. The cured cases, judged by the 3 to 5 year standard, 21 per cent.
4. From the entire series of 5,027 cases only 9.82 per cent. were alive at the end of five years.

Any surgical procedure which is accompanied by a primary mortality of 18 per cent. and cures only 10 per cent. of the total number of cases presenting themselves for treatment, is a disappointment; therefore, the medical profession welcomes any rational procedure which will decrease the primary mortality and increase the percentage of cures.

The use of radioactive agents such as radium and roentgen ray is so well recognized by the medical profession as a distinct adjunct in the treatment of malignant disease that no lengthy discussion is necessary to prove their reliability and potency. Cases have been reported in the literature for twenty years but it has required at least fifteen years to arrive at a few proper conclusions as to the best method of application. Many cases have been treated and are still being treated by the combined method of surgery and radium. An insufficient number has been treated by radium alone over a long enough period of time to establish a law. Hence it is not advisable to draw conclusions as to the relative merits of surgery and radium in the treatment of cancer of the uterus.

Our personal work with radium has covered a period of two years. We wish to report our observations in 48 cases, all of which have been followed long enough to note the primary effect of the treatment. Obviously, no attempt can be made to arrive at the percentage of cures. Certain facts are rather striking: (1) We have had no deaths from the effect of the treatment. (2) Every case except two was markedly improved by the treatment.

Accounting for the entire series of 48 cases, 10 cases have been lost track of, 7 are known to be dead, 12 have recurrences or metastases, 15 appear to be entirely free from any evidence of malignancy and are symptomatically well. No doubt some of these will develop metastases, but careful examinations show no visible, palpable or symptomatic evidence of cancer. The four remaining cases are classed as doubtful but we will put them in the probably malignant class. In the group of 15 cases which appear to be free from cancer at the present time only 4 had surgery of any sort. In the entire series only seven could

be classed as operable when they presented themselves for treatment. All the others were either frankly inoperable from the start or were cases with recurrent cancer following operation, with the exception of a very few treated prophylactically soon after operation.

The point we desire to emphasize is that no case need be refused treatment because the lesion has involved the perimetrial tissues. In our series only 7 were operable at all, and all were markedly improved except two. Here we have a remedy which will offer some relief even if there is no hope of cure.

Just what can we expect from the treatment? We know of no better way to illustrate this than by three very brief case histories:

CASE 1.—A married woman 48 years old noticed some vaginal discharge and a little irregular bleeding. Vaginal examination showed an erosion or beginning ulcer involving the posterior lip of the cervix. Tissue section examined by two competent pathologists proved the lesion to be epithelioma; 3,500 milligram hours of radium were applied within the cervical canal and against the cervix. The lesion disappeared entirely in three weeks, the cervix returned to normal and has remained so for one and one-half years.

CASE 2.—A married woman 52 years old, mother of eight children, gave a history of never passing the menopause. During the past year the bleeding had been irregular, sometimes losing rather large quantities of blood. There never had been any pain or discomfort. The discharge was offensive. Vaginal examination disclosed a large mass in the region of the cervix, the uterus firmly fixed to the bladder and rectum, in fact the entire perimetrial tissue appeared to be malignant. The pathologist's report was squamous cell carcinoma; 3,600 milligram hours of radium were applied within the mass in five days' time. At the end of the month the mass was gone, the uterus was freely movable, normal in size, and except for the amputated cervix and scarring of the vaginal vault, one could not tell there had been a malignancy of the uterus. The woman has remained free from recurrences or evidences of metastases for one year.

CASE 3.—Another case very similar to the second one with a massive involvement of the pelvis, showed a complete disappearance of the lesion, but three months later developed metastases in the abdomen and a recurrence in the uterus.

These three cases are quite typical of the entire series. All the early, or so-called operable cases, have returned to normal, and remained so up to date. Some of the very worst cases, with massive pelvic malignancy, have entirely cleared up; the uterus returning to normal, freely movable, soft, and no visible or palpable evidence of cancer remains. Others have cleared up temporarily but soon developed metastases or recurrences. Local recurrences have not been frequent. Therefore one can promise some degree of improvement to practically every case. If it is not a curable case, at least the patient can be freed from the horrors accompanying neglected can-

cer, such as hemorrhages, foul discharges, nervous apprehension, etc. We have seen several patients gain from 20 to 40 pounds within three months following treatment, and one patient gained 80 pounds. We know of no serious disease more satisfying to treat from the patient's standpoint than cancer of the uterus.

The treatment causes the patient very little discomfort; 7 to 10 days in the hospital is sufficient for the average case, and during one-half of this time the patient can be up and walk around the hospital, unless there is danger of hemorrhage. The accidents or serious sequelae following radium treatment have been practically nil in our experience. We have seen two rather alarming hemorrhages from the bladder; several have had transient cystitis or proctitis, subsiding very shortly with bed rest. We have seen none of the rectovaginal or vesicovaginal fistulae reported in the literature. One case of rectovaginal fistulae developed, which was a malignant perforation and was not due to the treatment. We have come to the conclusion that many such accidents are due to faulty technique. Just here we solemnly cross our fingers as we may be one of the unfortunates at any time, but certain things must be done to prevent accidents when radium is applied in heroic doses to the uterus, such as:

1. The lower bowel must be emptied by enema.

2. The bladder must be emptied every two to three hours while the radium is being applied.

3. The vagina must be packed carefully in an anterior posterior direction to get the greatest possible distance between the radium capsule and the bladder and rectum.

4. The vaginal pack must be so arranged that it is impossible for the radium capsule to become displaced and come in close contact with the bladder or rectum.

Careless methods in the application of radium to any part of the body can produce the most serious results. This is a potent remedy and the most careful consideration of the patient is necessary at all times.

The dosage required for the average case is about 3,600 milligram hours, heavily screened (at least one millimeter of brass). This should be given as quickly as the patient's condition will warrant. In our experience nothing is gained by dragging the treatment out over two or three months. If it is possible to deliver a lethal dose to a cancer cell at one time without doing the patient injury, there is no excuse for a long, tedious treatment. Radiologists feel that the minimum lethal doses for certain types of lesions are fairly well standardized, and experience has proven that it is possible to give enormous

doses without injury to the patient. It is also well known that oft repeated small doses of radium or roentgen-ray to any sort of malignancy may stimulate the growth and do more harm than good. Hence the only explanation of such treatment means one of two things: ignorance of the remedy, or a desire to impress the patient so that a larger fee may be collected.

Large, massive doses cannot be given safely to post-operative cases because the best natural filter for the radium is lost after the uterus has been removed. The uterus apparently withstands larger doses of radium without breaking down than almost any other organ in the body. Therefore this factor becomes a very important one because by using the uterus as a filter it is possible to radiumize cancer cells at a greater distance than if only the vaginal vault is left.

We do not wish to enter into a discussion in this paper as to the relative merits of radium and surgery in cancer of the uterus but at least one point should be understood. If in a given case it is decided to use both radium and surgery, by all means use the radium first. A sufficient time should elapse before operation to allow the cycle of retrogression to take place. This usually is seen in from three to six weeks. A cancer cell which has been heavily radiumized is either killed or at least rendered temporarily inactive. A pelvis which has been so treated certainly makes a better operative field than one which is filled with highly malignant cells.

If these statements are true, and all the experimental and clinical evidence leads us to think they are, then we owe to all our patients the benefit of preliminary radium treatment before operation. We are fully convinced that if this technique is employed a great many more cases of cancer of the uterus will be cured.

Donaldson and Knappenberger.

738 Lathrop Building.

DISCUSSION

DR. EDW. H. SKINNER, Kansas City: One of the most interesting features of radium therapy is that it seems as though the surgeons themselves will be the ones who will prove the availability of radium treatment in carcinoma, not only of the uterus, but of other parts. Those of us who have worked in radiology for years and have attempted certain propaganda in educating others toward the use of these agents have not done nearly as much as the few large surgical clinics which possess radium. I believe we will have more confidence in radium therapy when we realize that surgeons themselves are using radium more and more often in preference to surgical procedures.

Some of the large European clinics have done a great deal in the educational features of radium therapy, because they have chosen radium therapy in

preference to surgery, which has always been, and always will be, available.

So I want to make the point that surgeons themselves who may have antagonized the gradual use of radium are the ones who will in the end prove its great value.

DR. JOHN KIMBROUGH, St. Louis: I am glad to have had the pleasure of listening to Dr. Donaldson's paper. He certainly has covered the subject very thoroughly.

There is much to be said about the treatment of carcinoma of the uterus with radium, and I have been particularly interested in it because the results have been so surprisingly good they have really been astonishing to those who have applied it for cancer of the uterus. I know of no other class of cancer cases where we have such good results, with the exception of the basal cell cancer of the skin.

Every case is a law unto itself. My experience has been, the cases have either been inoperable or recurrent. Application of the radium and the filtration mean a great deal. The results one expects to get are dependent upon this filtration. One reason we get good results here is that Nature gives us a good filter. Some of the best results I have seen have been where one could introduce the radium directly into the uterus and leave it there for eighteen to twenty hours.

The Doctor spoke of having no deaths due to radium. I am sure I had two hopeless cases where death was hastened by its application. After the application there was a large amount of fibrous tissue and the ureters were caught in it; the patient developed complete suppression of urine and died a few weeks afterwards.

There is much yet to be learned about the application of radium and we are going to obtain better results when we improve the technique of application and especially that of filtration.

There has been much discussion about the first treatment, as to how long it should be, and the after-treatment. I think the general opinion is that if you can give a large dose of radium and do all you can do the first treatment you get the best results.

I do not believe I have seen a single case that has not been improved. Most of them go to a regenerative process with freedom from hemorrhage and discharge. Much depends on the future to tell what our percentage of cures will be.

CLINICAL MANIFESTATIONS OF GALL BLADDER INFECTION*

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AND

J. C. LYTER, M.D.

ST. LOUIS

The large majority of gall-bladder diseases give rise to typical syndromes and offer no great difficulty in the matter of diagnosis to the internist or surgeon. There remain, however, a number of individuals with various vague digestive disturbances resultant upon infections and diseases of the bile passages which tax to the utmost the skill of the diagnostician. A careful understanding and ap-

preciation of the etiology and pathology of gall-bladder diseases makes the task of tracing these symptoms to their cause in the gall-bladder a much simpler matter.

All the surgical diseases of the gall-bladder and bile passages, unquestionably, have their origin in bacterial infection. The severity and persistence of the disease depends, as in bacterial infections of other organs, upon the type and virulence of bacteria and upon the resistance of the individual or tissue to the micro-organisms. Considerable headway has of late been made in arriving at a clear conception of the pathogenesis of gall-bladder and duct infections. Rosenow, some years ago, demonstrated the fact that the gall-bladder could be and often was infected through the blood stream, and more recently Graham has shown conclusively that gall-bladder infections occur directly through lymph channels connecting the walls of the gall-bladder and the under surface of the liver. To our minds, the work of Graham is of great importance in clearing up some of the little understood methods of infection of gall-bladder from liver or, vice versa, liver from gall-bladder. Before the work of Rosenow, the opinion was rather generally held that gall-bladder infections occurred through contaminated bile being washed down from the liver into the common duct, or the infection being carried up from the intestine through the sphincter *odii* into the common duct, involving, first, the mucous membrane and later the walls of the gall-bladder. In the light of recent studies, it is hardly possible for this opinion to be maintained. The common duct seems to have been so constructed by nature as to largely prevent infectious material passing upward from the intestine into its lumen, and, finally, into the gall-bladder. Coffey and Mayo both call attention to the fact that ducts constructed in the manner of the common duct are rarely ever followed by infections through the duct. As will be recalled, the common duct enters the duodenum through the muscular layers, running down to the mucous layers and then running along between the muscular layers and mucous membrane some little distance before opening into the gut itself. By this arrangement of the duct, the intra-intestinal pressure, according to Coffey, is such that the wall of the duct passing between the layers of the intestine, prevents dilatation of the duct and, consequently, passage backward of intestinal contents. Coffey, taking note of this condition, has shown that ureters transplanted into the intestines in such a manner that the ureter runs for some distance between muscular and mucous layers of the intestine before opening into the lumen of the gut, is practically never followed by ascending infections of the kid-

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

ney. On the other hand, he has shown that when the common duct is transplanted directly into the duodenum without regard to the above-mentioned principle, the duct invariably dilates almost to the size of the duodenum itself. He also found that transplanting ureters directly into the lumen of the intestines of animals is practically always followed by destruction of the kidney, caused either by back pressure or ascending infection or both and that the ducts were dilated. Therefore, it is seen that ascending bile infection of the gall-bladder or ducts is made by Nature a difficult process. Granting that infectious materials might gain their entrance through the bile passage, there remains the well-known resistance of mucous membranes to invasion by bacteria. In contrast to this how simple is the explanation of either hematogenous or lymphatic infection of gall-bladder and bile ducts; it is the means by which infection is carried in practically all other portions of the body. It is hard to understand why Nature would reverse the order of things in the gall-bladder region. Graham has confirmed the findings of Sudler, who several years ago showed by injecting the lymph vessels of both the gall-bladder and the under surface of the liver with coloring matter, that there is a direct connection between the lymph vessels of the under surface of the liver and the walls of the gall-bladder. After a number of experiments, Graham states that the "lymphatics of the gall-bladder can be distended by injections into the portal vein. It is, therefore, easy to understand how the organisms may spread through the lymphatics to the gall-bladder wall from an infection in the liver and thus set up a cholecystitis secondary to a hepatitis." In fact, he states that "it seems a much more probable mode of infection than the rather fanciful one of a surface infection of the gall-bladder through contact with organisms floating in the bile." Certainly the explanations of both Rosenow and Graham can definitely explain the pathogenesis of biliary tract infections.

The clinical manifestations of chronic gall-bladder and duct infections vary within exceedingly wide limits. The infection can and does exist for months in some instances, absolutely symptomless; at least the symptoms are so mild as to be considered of no importance by many individuals. The nervous constitution of the patient plays no small part in the severity and importance of symptoms of which he complains. Pain and tenderness over the site of the gall-bladder is present in a large proportion of cases in our experience and when present is of considerable importance in making a diagnosis. The relationship and character of pain to the various gastro-intesti-

nal functions is valuable; it may vary in character from slight discomfort to well-defined colic, partaking of the qualities of gall-stone attacks. Jaundice, in our experience, is very significant and rare. The chief complaints of the milder gall-bladder infections are found in the gastro-intestinal tract; these symptoms have been described by different surgeons and internists as gall-bladder dyspepsia or indigestion. They are, of course, entirely reflex and vary widely in their interpretations by the patient. Prominent among these complaints are inability to eat certain foods, such as anything greasy or fried, salads, apples and similar foods; belching of gas, feeling of fullness, probably due to collection of gas in the upper intestinal tract or stomach. There seems to be no definite relation between time of ingestion of food and production of symptoms. Many of these patients find it necessary to take baking soda for relief and occasionally well defined attacks of vomiting are seen. These symptoms are all reflex and probably the result of the loss of equilibrium between the vagal and sympathetic nerve supply. Ulcer and cancer are the actual diseases of the stomach which give rise to symptoms. When these conditions and appendix disease can be excluded, the cause for reflex digestive disturbances will most often be found in an infected gall-bladder or ducts. It is true, no doubt, that reflex digestive symptoms may arise as a result of hepatic infection or pancreatic disease.

A careful fluoroscopic examination of the stomach and duodenum renders valuable information in those cases accompanied by adhesions between gall-bladder and duodenum. In such cases, the second portion of the duodenum is immovable and more or less irregular. After noting this fluoroscopic finding in many cases where adhesions thus located were verified at operation, we have come to look upon it as a very important finding in case of pericholecystitis. This fluoroscopic finding is indicative of adhesions around only the second portion of the duodenum and becomes valuable as a sign of pericholecystitis after the exclusion of other processes, such as duodenal ulcer with perforations, capable of producing an adhesive periduodenitis.

Within the past three years Lyons, using as a fundamental foundation the physiological researches of Meltzer demonstrating the crossed innervation of the gall-bladder and Oddis sphincter and the known ability of a saturated solution of magnesium sulphate to dilate smooth muscle fibers, has devised an ingenious method by which transduodenal drainage of the gall-bladder and the bile ducts is effectively accomplished. By the transduodenal drainage of the gall-bladder and ducts we

have a method for obtaining the bile from the ducts and gall-bladder for macroscopic, microscopic and bacteriological study. Since the method of transduodenal aspiration of the gall-bladder has been widely written up, we have thought best to omit the technique.

We have followed the method of Lyons in our Clinic at St. Anthony's Hospital in about 100 cases; more than 20 of these cases have come to operation, but only 12 have been studied with sufficient care to justify definite conclusions being drawn after operation.

The accompanying slide briefly summarizes the findings in the 12 cases to which we have just referred:

3. If culture of the aspirated gall-bladder bile shows bacterial growth after careful technique, it is probable that the same bacteria will be found in the bile of the gall-bladder removed at operation.

Our experience seems to justify the conclusion that transduodenal aspiration of the biliary apparatus is of considerable importance in the diagnosis of gall-bladder disease. In certain cases fluoroscopic examination is likewise valuable. However, in our opinion no other factor in the diagnosis of gall-bladder disease has anything like the value of a carefully taken history of the individual's complaint. After all is said and done a descrip-

PATIENT.	PRE-OPERATIVE EXAMINATION GALL-BLADDER BILE.		POST-OPERATIVE FINDINGS GALL-BLADDER BILE.		LESION AT OPERATION.
	Microscopic and Macroscopic Exam. Bile.	Culture.	Microscopic and Macroscopic Exam. Bile.	Culture.	
1. Mrs. A. A.	Tenacious, thick, turbid pus.	Bacilli Coli Communis	Pus; thick, turbid.	Bacilli Coli Communis	Thick-walled, adherent to duodenum. Chronic inflammation.
2. Mrs. N. Z.	Flocculent, turbid particles.	Streptococcus Bacilli Coli Communis	Pus. Thick bile.	Streptococcus Bacilli Coli Communis	Thick-walled, inflamed gall bladder. Stones. Streptococci and Bacilli Coli Communis cultured from walls of gall bladder.
3. Mrs. V. D.	Mucous appearing bile.	Bacilli Coli Communis	Mucus-like bile. Pus.	Bacilli Coli Communis	Thick-walled gall bladder; adhesions to liver and duodenum. Pathological diagnosis: Acute Cholecystitis.
4. Mrs. A. H.	Dark, thick bile.	Bacilli Coli Communis	Very dark bile. Stones.	No growth	Thickened gall bladder; distended, many stones.
5. Sr. M. B.	Pus cells.	Diplococci Bacilli Coli Communis	Not examined.	Culture not made.	Many adhesions to gall bladder. Walls thickened.
6. Mrs. McC.	Normal appearance.	Bacilli Coli Communis	About normal appearance.	Not made.	Chronic Cholecystitis. Chronic Pancreatitis. Stones in gall bladder.
7. Mrs. G. K.	Some flaky material in bile.	Streptococci Staphylococci	Not obtained.	Not made.	Gall bladder examined in pelvic operation; contained stones; distended.
8. Mrs. M. M.	Pus in clumps.	No growth		Not made.	Chronic Cholecystitis. Adhesions between duodenum and gall bladder.
9. Mrs. B. L.	Apparently normal.	Bacilli Coli Communis	Dark brown.	No growth.	Thick-walled, distended, non-compressible gall bladder.
10. Mrs. E. S.	Dark brown bile.	No growth	Dark brown.	Not cultured	Thick-walled, non-compressible gall bladder. Chronic Cholecystitis.
11. Mrs. B. M.	Thick, dark green bile.	No growth	Thick, dark green.	Not made.	Thick, grey-walled gall bladder. Adhesions to duodenum.
12. Mrs. R. M.	Golden yellow.	Bacilli Coli Communis	Not obtained.	Not made.	Gall bladder normal to palpation. Examined in course of pelvic operation.

From our study of transduodenal aspiration of the biliary apparatus, both in cases not operated upon and in those cases which have come to operation giving an opportunity for checking up the findings in the aspirated bile prior to time of operation, we feel justified in drawing the following conclusions:

1. The cystic duct may be considered patent, if there is a rapid flow of thick, dark green bile after magnesium sulphate is instilled into the duodenum. Chronic cholecystitis may be suspected if this aspirated bile reveals much mucus, numerous epithelial cells, leucocytes and intracellular bacteria.

2. If, in the absence of an acute cholecystitis, there is no gall-bladder bile after instilling magnesium sulphate, it is probable that the cystic duct is closed as a result of stone or diseases of the duct.

tion of the patient's trouble by the patient is the most necessary single factor in the diagnosis.

University Club Building.
Frisco Building.

CYSTITIS: A SYMPTOM OR A DISEASE?*

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The term cystitis has been rather loosely applied by the profession at large to any and all conditions associated with dysuria.

The term cystitis as ordinarily used, without

*Read at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

qualifications, is presumed to designate an inflamed condition of the urinary bladder. Thus it occurs and quite logically, too, that the physician having decided that his patient is suffering with cystitis should turn to measures calculated to relieve bladder inflammation, usually some sort of irrigation procedure, which, in many instances, affords the patient very little if any relief, because either the patient is not suffering with cystitis or the case is complicated by disease elsewhere in the genito-urinary tract, and bladder irrigation does not solve the problem.

It is not possible, within the limits of this paper, to deal fully with all phases of cystitis. I shall, therefore, limit my remarks to a discussion of the essential conditions which are productive of dysuria, commonly termed cystitis, together with the symptomatology and differential diagnosis.

Primarily, it must be borne clearly in mind that cystitis, as a distinct entity, is rare; that it is usually coexistent with disease of the upper or lower urinary tract, or with disease of the genital organs.

Conditions productive of dysuria may be arbitrarily classified into three groups: (1) True cystitis, or essential bladder inflammation only; (2) cystitis, associated with disease in the upper or lower urinary tract; (3) lesions, extravesical, which are the cause of dysuria.

True Cystitis or Essential Bladder Inflammation.—From a standpoint of etiology, cystitis can be conveniently classified as non-infective cystitis and infective cystitis.

Non-Infective Cystitis.—This type of cystitis, in some degree, always precedes infective cystitis. It is essentially a traumatic cystitis. The term traumatic in this sense is intended to designate congestion or inflammation of the vesical mucosa, due to the influence of some abnormal agent, either by contact, contiguity or external trauma.

Inflammation due to contact is the result of substances reaching the bladder from the kidneys, agents introduced through the urethra, or to retention of urine. Substances which reach the bladder by way of the kidneys fall into two groups: (1) Those which are the end-products of faulty individual metabolism, such as the excessive excretion of urates, oxalates, phosphates or other salts. (2) Those substances which are excreted by the kidneys, after having been ingested by the individual.

Certain so called urinary antiseptics, particularly urotropin, when taken in large quantity or in lesser quantity over a considerable period of time, is often productive of bladder irritation, characterized by a marked degree of inflammation.

Many of us are familiar with the situation in which the female patient, apprehensive be-

cause of delayed menstruation, has sought to correct the condition by self-administration of quantities of turpentine, resulting in symptoms of marked bladder irritation, frequency and tenesmus, with cloudy, blood-tinged urine.

Substances introduced into the bladder through the urethra are often productive of cystitis. These substances, of which silver nitrate is the most common, are usually introduced with therapeutic intent, but in concentrations beyond the tolerance of the bladder membrane.

Foreign bodies introduced into the urethra often find their way into the bladder, resulting often in extensive inflammation; as for example, hair pins in the female bladder, and grains of wheat or other small objects found in the bladders of children.

Retention of Urine.—This condition undoubtedly plays the leading role in the early causes of cystitis. Retained urine which undergoes certain chemical changes, causes primarily irritation and congestion of the bladder mucosa. Its further action as an excellent culture media for bacteria makes bladder infection inevitable, sooner or later.

The principal causes of urinary retention, peculiar to the male, are prostatic hypertrophy, median bar development, inflammatory conditions of the prostate or seminal vesicles, and urethral stricture.

Causes of retention peculiar to women are dependent principally upon malposition of the uterus and allied conditions. In the sagging bladder, associated with uterine prolapse or cystocele, a retention condition develops similar to that associated with prostatic hypertrophy in the male. This type of sagging bladder is often seen following hysterectomy. These patients almost invariably, sooner or later, develop symptoms of bladder irritation.

Stricture of the female urethra, while not as common as stricture in the male, is occasionally the cause of urinary retention. Probably a more common condition is contracture of the vesical neck. This condition is more common in women and is probably associated with the higher developed bladder neck sphincter upon which the female is wholly dependent for bladder control.

Conditions causative of retention common to both male and female are new growths in the bladder neck region and spinal disease.

Extension of Inflammation by Contiguity.—In the female this condition is fairly common, due to the fact that a large percentage of women are subject to pelvic inflammation, associated with pathology of the generative organs. In the male, acute inflammatory conditions of the prostate and seminal vesicles almost invariably extend to contiguous bladder structures.

External Trauma.—Under this heading may be included: Exposure to intense cold, bladder trauma associated with pelvic injuries, and trauma incident to bladder manipulation during pelvic surgical procedures.

Infective Cystitis.—As previously stated, I am of the opinion that infective cystitis, with possibly a few exceptions, is secondary to traumatic cystitis, in one form or another. It has been abundantly proven that the normal bladder is resistant for a protracted period to the invasion of bacteria from its cavity into its walls. The rarity of bladder infection following instrumentation, as catheterization or cystoscopy of normal bladders is evidence of this fact. It is pretty generally conceded that the urine of apparently normal individuals contains bacteria from time to time. This, no doubt, is a perfectly normal function, and one of the means by which bacteria are eliminated from the system. As long as a normal physiological condition of the urinary tract exists, these bacteria are eliminated without incident. But as soon as trauma occurs, ranging from simple bladder congestion to actual trauma to the bladder wall structures, as from instrumentation, surgical manipulation, or ulceration due to stones or tumors, the condition becomes favorable to bacterial development, especially if a urinary retention retards elimination.

In numerous instances in which bladder infections have developed after pelvic operations on women, where post-operative catheterization was necessary, the surgeon has placed the responsibility on the nurse and the catheterization, whereas bladder trauma resultant from manipulation during the operation was primarily the causative factor.

Retention of urine undoubtedly holds first place as a predisposing factor in infective cystitis. In many instances, a non-infective cystitis would never have become infective had proper drainage conditions existed. The causes of urinary retention have been previously discussed, and if one would solve the problem of infective cystitis, it must be ascertained that proper bladder drainage exists regardless of whether or not other factors are involved in the etiology of the disease.

It is the exception for a urinary retention to continue over a protracted period without becoming associated with bladder infection. On the other hand it is not uncommon to encounter infections in the upper urinary tract, which apparently have been present for a considerable period, in which cystoscopy discloses practically a normal bladder, due no doubt to free bladder drainage.

Infective cystitis is either acute or chronic. The acute type is usually associated with the coccoid type of infection, and follows acute trauma. The chronic type, as a rule, follows

acute cystitis, but the condition is dependent mostly on chronic trauma, as for example, retention of urine. The infection is usually of the bacillary type with an alkaline urine. Occasionally an infective cystitis is chronic from the beginning; in other words, it is progressive and persistent. Errors of metabolism undoubtedly are an important factor in these cases.

Bladder Inflammation Associated with Disease of the Lower Urinary Tract and Allied Pelvic Structures.—This inflammation may range from a slight hyperemia of the vesical neck or trigone to an intensive chronic cystitis of the infective type, according to the persistence of the extra-vesical cause and to the degree of urinary retention.

In the male, the problem is not one of particular difficulty. Bladder irritability is ordinarily due to disease of the prostate, seminal vesicles, or to urethral stricture. Occasionally, hemorrhoids or other types of rectal disease are associated with bladder irritability, but I am of the opinion that this irritability is really a rejuvenation of a quiescent prostatitis, or seminal vesiculitis. Chronic disease of the prostate, and more especially of the seminal vesicles, is usually productive of certain degrees of hyperemia of the trigone, which is the immediate factor in bladder irritability in these cases. During the progress of an infective process in the prostate or seminal vesicles, the products of infection—pus and bacteria—are dumped into the prostatic urethra. The cut-off muscle prevents drainage into the anterior urethra and as a result these products find their way back into the bladder and are productive of cystitis. Essential bladder infection occurs more often in the types of infection other than gonorrhea. The consensus of opinion seems to be that gonorrheal involvement of the bladder proper almost never occurs, due, no doubt, to the character of its histology.

Stricture of the urethra and prostatic enlargement are productive of bladder inflammation and ultimately result in cystitis of the infective type due to retention of urine.

In the female the situation is more complex. Here the condition of bladder irritability is often intricately bound up with the problem of pelvic disease in all its various forms.

Quite frequently it occurs that ureteritis, trigonitis and urethritis are coincidentally present and the etiology of each, traceable to pelvic conditions peculiar to women, namely—injury during childbirth, malposition incidental to pelvic floor injury or to uterine or tubal disease.

These conditions are further modified by pelvic congestion incidental to the menstrual function; many of these patients experience no irritability, except during the menstrual pe-

riod. Probably the condition of most frequent occurrence, due to disease or malposition of the pelvic structures, is trigonitis, which in this connection cannot be classified as a true cystitis; as in the male this form of trigonitis is essentially a hyperemia of the trigonal membrane and is due to circulatory disturbance.

Disease of the Urethra.—Disease of the female urethra is almost invariably associated with symptoms of vesical irritability. The limited area of the urethra predisposes to extension to the vesical neck of any form of urethral involvement. A frequent cause of dysuria is caruncle in the upper urethra. These small, finger-like tumors, when situated near the bladder neck, often are caught in the vesical orifice at the end of urination, causing painful spasm of the vesical neck, till washed back into the urethra by subsequent voidings.

Bladder Inflammation, Associated with Disease of the Upper Urinary Tract.—With the perfection of modern cystoscopic and ureteral catheterization methods has come a more definite understanding of the relationship between bladder infections and disease in the upper urinary tract.

It has been a matter of considerable speculation, in cases of coexistent bladder and kidney infection, whether the primary focus of infection involved the kidney or the bladder. It is a well-known fact, however, that sooner or later, a kidney infection is followed by bladder involvement and vice versa.

It is not difficult to account for bladder infection secondary to disease in the upper urinary tract. Primarily, the bladder undergoes inflammatory changes due to the presence of irritating urine from the infected kidney. Secondly, bacteria being eliminated in the urine, find lodgment and readily develop on the inflamed bladder mucosa, especially in the presence of urinary retention. In some instances, the bladder infection undoubtedly occurs by parietal extension from the ureter, as in many cases of tuberculous cystitis.

It is still a debatable matter as to the exact route taken by infection reaching the kidney from a bladder focus. It is pretty generally conceded that bacteria from the bladder do not reach the kidney by way of the ureter, but by way of the lymphatics, except, perhaps in cases of marked and long standing obstruction in the lower urinary tract, resulting in back pressure and ureteral dilatation. A considerable variance of opinion exists, however, as to whether the infection is transmitted by direct lymphatic communication or whether the infection departing from the bladder by way of the lymphatics is transmitted to the general circulation, producing a bacteriemia, which, in the presence of renal congestion invites kidney infection. Bladder inflammation

usually displays the greatest degree of intensity in the region of the trigone. The ureteral orifices and lower ureters, on account of their anatomical position, are prone to become involved in the inflammatory process with attendant edema, resulting in urinary obstruction and back pressure on the kidneys. Thus, a condition is created favorable to the development of kidney infection, whether or not we conclude that the infection reaches the kidney by direct lymphatic invasion or by way of the blood stream.

Symptomatology and Differential Diagnosis.—I have elected to discuss symptomatology and differential diagnosis collectively for the reason that the cardinal symptoms, frequent and painful urination, are more or less common to the several conditions previously considered.

True Cystitis.—The symptoms of cystitis are frequent and painful urination, and pyuria. The one constant symptom is pyuria; without it there is not cystitis. But it must be remembered that these symptoms are also indicative of disease in other parts of the genito-urinary system and that a diagnosis of cystitis based on these findings alone is unwarranted. The above symptoms serve only to direct our attention to the disturbance of normal bladder function, and the diagnosis of true cystitis, or primary bladder inflammation, can only be made by process of elimination.

Non-Infective Cystitis.—In the non-infective type, the classical symptoms of cystitis—frequency, pain and pyuria—are present, but without bacteria in the urine. The history and clinical findings are often fairly conclusive and a final diagnosis can frequently be made by observation of therapeutic results. If metabolic disturbance is suspected, treatment directed toward the correction of this condition is ordinarily followed by improvement. Dysuria following the ingestion of drugs or chemicals tends to improve on withdrawal of the offending substance and the administration of urinary sedatives. In cystitis due to the introduction of chemicals per urethra, the history is usually sufficient. The presence of foreign bodies in the bladder can always be readily determined by cystoscopy.

Bacteriuria is sometimes confused with cystitis, due to the presence of cloudy urine, but microscopical examination of the urine discloses the absence of pus and rules out cystitis.

Extension by contiguity in women occurs from lesions of the pelvic organs. Bladder inflammation of this type is apt to be intermittent in character, according to the progress of the pelvic condition. Diagnostic procedure in dysuria of women should invariably include a careful pelvic examination.

As previously mentioned, inflammatory con-

ditions of the prostate and seminal vesicles ordinarily involve adjacent bladder structures. The acute lesions are almost invariably accompanied by pain referred to the rectum. Rectal palpation discloses a swollen and tender condition of the prostate and vesicles. Rectal palpation should be routine in all cases of dysuria in men, keeping in mind the fact that tuberculous seminal vesiculitis is not uncommon.

Cystitis complicated by, or due to, obstruction in the lower urinary tract is usually attended with a certain degree of difficulty of urination. Retained urine is present and can be determined by catheterization after the patient has voided. In the male, the cause can be determined by prostatic and urethral examination; in the female, by pelvic and urethral investigation.

Cystoscopy should be routine in cases of retention, in order to rule out spinal disease.

Finally, non-infective cystitis can usually be considered as an acute type of cystitis, or at least a recurring type of bladder inflammation due to irritation from some extravescical source. The course of the disease is largely dependent on the discovery and elimination of the cause. Cases of suspected cystitis of the foregoing type which do not respond promptly to expectant treatment should receive thorough cystoscopic investigation in order to ascertain that some destructive kidney or bladder lesion is not under way of development.

Infective Cystitis.—With the infective type of cystitis, the problem is usually complex. The case is often, and in fact usually complicated by involvement of the upper urinary tract or obstruction in the lower urinary tract. The classical symptoms of cystitis obtain, plus bacteria in the urine. With the above findings the diagnosis of infective cystitis can be made only after it has been determined that lesions in the lower or upper urinary tract are not the source of pus and bacteria in the urine.

It must be conceded that these conditions, when the cause of dysuria, are usually also productive of some degree of bladder inflammation but a distinction must be made between true bladder infection as an entity and extravescical lesions which are primarily the cause of the symptoms and the bladder inflammation as well.

Associated Disease of the Lower Urinary Tract.—With the classical symptoms of infective cystitis, it should first be determined that the condition is not that of disease in the lower urinary tract.

In the female, these symptoms are often the result of urethritis. Voided urine is misleading and specimens for analysis should always be obtained by catheter. Palpation of the

urethra per vagina discloses tenderness, and stripping toward the external meatus usually discloses pus and bacteria. The chronic type of cystitis so often seen with the sagging bladder, due to uterine displacements or pelvic floor injury, is frequently associated with urethritis. Cysto-urethroscopic examination makes the diagnosis absolute.

Infective cystitis, when associated with disease of the lower urinary tract in the male, is usually an extension of an infective process of the prostate or seminal vesicles. Palpation per rectum discloses pathological changes in these structures, and the expressed secretion contains pus and often bacteria. Mixed infection, other than gonorrhea, often involves these structures and cystitis is more common with this type of involvement which often supersedes a gonorrheal infection, especially in elderly patients with some degree of prostatic hypertrophy. The urine should be voided into three glasses, all of which are cloudy in the presence of cystitis. Cystoscopy establishes a definite diagnosis.

During the course of a prostatitis or vesiculitis of the above type when cystitis is suspected, marked relief often follows the judicious administration of urinary sedatives. Persistent pyuria in these cases frequently necessitates urethral catheterization to rule out kidney involvement.

Urethral stricture is often confused with prostatitis as a cause of bladder inflammation, as urinary retention is common in either condition. Urethral exploration and prostatic palpation should differentiate the lesion.

Prostatic enlargement with obstruction ultimately becomes complicated by cystitis; the age of the patient should suggest the complication. Rectal palpation, if not conclusive, should be supplemented by cystoscopy.

Associated with Infection of the Upper Urinary Tract.—It seems fitting to repeat in this connection that the symptoms, frequent and painful urination, with pus and bacteria in the urine, do not represent cystitis until other lesions of the genito-urinary system are excluded. The haphazard tendency toward designating all dysuria as cystitis is often responsible for the development of many destructive kidney lesions while the patient is being subjected to blind vesical therapy. With our present-day methods of scientific and accurate investigation by cystoscopy and urethral catheterization, it is hardly excusable that gross errors in diagnosis should occur in these cases.

A few clinical symptoms are worthy of mention, and are of assistance when present. First, the occurrence of chills, fever and general depression with dysuria, should arouse suspicion of a kidney infection in the absence of a known pelvic lesion, as for example acute prostatitis

or salpingitis. Second, pain and tenderness along the course of the ureter or in the region of the affected kidney may be present. Third, pyuria and dysuria may be intermittent with kidney infection, whereas it is constant with cystitis. Fourth, as previously mentioned, acute bladder infection is usually associated with the coccoid type of bacteria, and chronic infection with the bacillary type; given an acute dysuria with pus and a bacillary bacteriology, one should be suspicious of involvement of the upper urinary tract, usually the kidney.

These symptoms, however, are inconstant and cannot be depended upon for diagnosis of kidney infection. It must be repeated that every case of suspected cystitis, which does not readily respond to local bladder therapy should have the benefit of a thorough cystoscopic investigation. Ureteral catheterization discloses whether kidney infection is present. Roentgen-ray catheters should be used in order to determine the presence of ureteral calculus. Tests of comparative renal function can also be made before withdrawal of the ureteral catheters, which gives us an estimate of the extent of the kidney lesion.

Vesical tuberculosis is generally conceded to be secondary to renal tuberculosis and for that reason the early discovery of the renal lesions is most important. Renal and ureteral tuberculosis should always be kept in mind, particularly when the classical symptoms of cystitis occur in young individuals, and when these symptoms cannot be explained by the presence of other lesions. The disease occurs more frequently in males. The history in these cases often discloses hematuria, preceding, or early associated with dysuria. The disease is mostly unilateral and the most painstaking cystoscopic and ureteral investigation, together with expert laboratory technic is usually necessary to solve the diagnostic problem.

Dysuria Without Cystitis.—It is rather a difficult matter to set aside and isolate a group of lesions, which, although extravescical, are by reason of intimate contiguity responsible for bladder irritation, and at the same time to say that there is not bladder inflammation. From a technical standpoint, some degree of bladder inflammation is probably present, or a few pus cells can usually be demonstrated in the urine, in any case displaying symptoms of dysuria, but the extravescical lesions are primarily the cause of the dysuria. These lesions may be classified in two groups: (1) Those of the upper urinary tract; (2) those involving the lower urinary tract, the genital and adjacent pelvic structures.

Lesions of the Upper Urinary Tract.—Frequent and painful urination has previously been described by most writers as one of the

standard symptoms of renal infection and of renal calculus. I believe that the impression has almost universally prevailed that these symptoms are due to a referred sensitiveness of the bladder, resulting from irritation or distension of the kidney pelvis. More recently, however, this opinion has been modified by more detailed study and better analysis of associated pathology of the ureters. Recent studies of lesions in the lower ureter tend to confirm the opinion that in those cases of renal disease in which dysuria is a symptom an associated pathology of the lower ureter is also present, that this, and not the kidney lesion is the real cause of the dysuria. Probably the most notable work along this line in recent years has been done by Hunner. In discussing bladder symptoms due to ureteritis, he says:¹ "We are familiar with the bladder distress associated with the tuberculous kidney, and often occurring in such cases without any visible bladder lesion, or at most, with a slight reddening and edema about one ureteral orifice. In such cases, we can usually find palpable thickening of the lower end of the ureter, and pressure on this thickened ureter causes intense bladder distress. It is probably the ureteral, rather than the kidney lesion which gives rise to the urgent micturition impulses in such cases.

"Similarly in the infected calculus kidney cases and pyogenic pyelitis cases, one can usually make out on palpation a slight thickening and elicit great tenderness of the lower portion of the ureter and peristalsis of the tender ureter is probably an important factor in the reflected bladder distress."

Keyes,² in discussing renal infection, says: "Distension of the renal capsule does not cause frequent and painful urination." Again, referring to vesical symptoms in renal infection, he says: "It is not known whether these referred symptoms can actually occur in the absence of some inflammation in the lower ureter."

Cabot,³ referring to symptoms of stone in the kidney and ureter, expresses himself as follows: "Frequency of urination and vesical irritability have often been referred to as a common symptom in renal calculus during an attack. Evidence, however, is accumulating (Braasch) to show that most of these cases are in fact due to stone in the ureter, and I do not feel clear that pure renal calculus produces this symptom."

The important point in the consideration of these symptoms is that the evidence is in favor of placing the responsibility of vesical irritability, in disease of the upper urinary tract, upon lesions in the lower ureter, and it must be remembered that diseases of the lower ureter, whether it be ureteritis, stricture or stone, in-

variably results in urinary obstruction, which is the prime factor in the development of renal infection.

Ureteral stricture, its precursor, ureteritis, and its sequel, renal infection, are considerably more common in women. The fact that the female ureter in passing through the broad ligament is subject to additional narrowing at this point, is probably a factor in the more frequent occurrence in women. It is at this point that most of the strictures are found.

Another factor is the unstable position of the bladder trigone and the lower ureter due to variation in the position of the uterus. Changes in the position or tension of the broad ligament are productive of changes in ureteral drainage. The frequency with which bladder symptoms develop some years following hysterectomy is worthy of consideration in this connection. The findings in these cases are quite constant. Pain, usually intermittent in character; frequency of urination, often without distress. Vaginal palpation discloses a very tender bladder trigone and lower ureter. On cystoscopic examination, the trigone is seen to drop abruptly down from the bladder neck. The position of the ureters makes catheterization difficult, and is always attended with considerable distress to the patient, due to tightness and inflammation of the lower ureter. Changes in the position of the bladder and lower ureters following hysterectomy are undoubtedly largely responsible for this condition.

The Lower Ureters.—As previously mentioned, disease of the upper urinary tract, when the cause of dysuria is conceded to include an involvement of the lower ureter. But it has been shown that disease of the lower ureter alone is common and is responsible for many dysurias, especially in women. Ureteritis probably precedes ureteral stricture and in many instances ureteral calculus. The history in the two latter conditions, however, is often negative as far as previous urinary disturbance is concerned. But, it is probable that the symptoms incident to the previous ureteritis may have been sufficiently mild as to have not impressed the patient's memory.

A notable feature of the symptomatology in these cases is the variable intermittency and the precipitate onset. The symptoms often appear out of a clear sky and are usually characterized by frequency of urination and pain in the region of the bladder. Frequency, however, may be absent.

The symptomatology in calculus and stricture is often similar in that the patient may experience variable periods without symptoms followed by a sudden recurrence of frequency and pain. The character of the pain in either condition is usually lancinating and spasmodic.

Differential diagnosis is frequently attended with considerable difficulty. It often occurs that stone is suspected, but not demonstrated, but the patient is relieved of all symptoms following ureteral exploration, due to divulsion of the stricture. Ureteral stricture is more often bilateral. The urine in either condition may contain a small amount of pus or a few red blood cells. Occasionally ureteral stricture is responsible for so-called idiopathic hematuria. The urinary findings, however, are usually without feature. Finally, differential diagnosis between stricture and calculus remains with the wax bulb ureteral catheter and X-ray findings by ureterography.

In ureteritis, the pain and dysuria are more constant. The course of the disease is seldom characterized by periods of well being in which the patient is free from all symptoms. The daily intermittency of symptoms is variable. One patient may complain chiefly of dysuria during the day; another will experience practically no difficulty during the day, but frequent and painful urination persists during the night. Still another patient has an attack beginning late in the day and continuing for a few hours after which there is only slight dysuria, and at times no symptoms till the following evening. Most patients, however, complain of rather constant pain and frequency. Many patients complain of pain which appears when the bladder becomes distended, and which is relieved on voiding. This symptom is also characteristic of so-called "elusive bladder ulcer." The most painstaking cystoscopic examination is often required to differentiate these lesions. Occasionally ureteritis is productive of pain only, no dysuria being present. Pain at the end of urination is indicative of an associated trigonitis. Ureteritis is commonly bilateral. The patient complains of pain and tenderness in both lower abdominal quadrants. Rectal or vaginal palpation discloses an exquisitely tender lower ureter. Urinary findings are inconstant. Pyuria in varying degrees may be present or the urine may be entirely clear.

The ureteral catheter, if passed to the kidney pelvis, usually returns a negative urine, but if urine is collected with the catheter inserted just within the ureteral orifice, the origin of the pyuria is often discovered to be from the lower ureter.

Cystoscopic examination usually reveals a comparatively normal bladder or perhaps only a slight reddening and edema about the ureteral orifice. In certain cases, however, an associated trigonitis is present, and in these a reddened trigone is noted. Ureteral catheterization is invariably painful. It quite often occurs that the patient, who has been complaining of pain in the bladder neck region will ex-

claim as the catheter is passed into the ureter, "There is my pain now!" Catheterization is usually followed by a temporary exaggeration of the pain and dysuria, due to increased inflammation and edema of the ureter incident of the passage of the catheter.

Differential diagnosis is between ureteritis, ureteral stricture, ureteral calculus, cystitis, and so-called "elusive" bladder ulcer. In the first three, final diagnosis is dependent upon findings by ureteral exploration in conjunction with the X-ray and the wax bulb catheter.

Cystitis can be ruled out with negative urinary findings. But when pyuria is present, complete cystoscopic and ureteral examination is essential to a correct diagnosis. The so-called "elusive" ulcer is of rare occurrence. It is usually associated with a clear urine. It quite often occurs that these ulcers are discovered only after repeated and the most painstaking cystoscopy.

Pelvic disease in women is often associated with persistent dysuria with a clear, sparkling urine. The direct factor in the dysuria is usually a hyperemic condition of the trigone.

Chronic seminal vesicle and prostatic disease is very often the cause of dysuria in the presence of a clear urine. It is the chronically inflamed vesicle with attendant hyperemia of the trigone which gets the patient up at night to urinate, as during the day his urination is normal.

Differential diagnosis is usually between lesions of the lower ureter and trigonitis. The two conditions are often associated, but the underlying cause is disease of the pelvic genitalia. Careful examination of these structures together with urinary and cystoscopic findings is essential to establish a diagnosis in these border line cases.

The Upper Urethra.—In both the male and female, chronic granulated conditions in the upper urethra are productive of urinary disturbance. Small cystic tumors, which are more common in the female, are also responsible for dysuria. These conditions are discovered only by cystourethroscopy.

Conclusion.—Before the advent of the cystoscope, ureteral catheters and modern laboratory technic, differential diagnosis between cystitis and other inflammatory lesions of the genito-urinary tract was entirely dependent upon clinical observation and urinary findings, and results were unavoidably confusing. It is, therefore, not surprising that a tendency has developed to designate the majority of dysurias, especially when associated with pyuria, as cystitis. Even at this time, with the aid of modern instrumental technic, differential diagnosis is often attended with considerable difficulty.

If we concede, as set forth in the preceding

discussion, that true cystitis is the prime causative factor in only a minority of the cases of dysuria, obviously the practice of casually diagnosing as cystitis all cases of painful and frequent urination, is open to grave error, and more so if the treatment is designed to fit the diagnosis. It is quite true that in many instances, a tentative diagnosis can be made from clinical observation alone, but no argument is needed to establish the fact that the cystoscope is the final referee in all doubtful cases.

But what of the physician who must treat cases of dysuria, and who, for one reason or another, is unable to obtain cystoscopic information? We can say only this: Let the diagnosis be based on careful clinical observation and urinary analysis, keeping in mind the fact that conditions other than true cystitis are more often the cause of dysuria, and if the case does not readily respond to treatment, insist upon cystoscopic confirmation or rejection of the diagnosis before extensive damage to vital structures occurs.

Rialto Building.

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DISCUSSION

DR. H. McCURE YOUNG, ST. LOUIS: There is just one point in this paper I would like to emphasize and that is the importance of a preliminary diagnosis before treatment of cystitis is undertaken. Cystitis is generally secondary to some other disease, such as pyelitis or prostatitis, and dysuria may occur without cystitis at all.

In making the diagnosis, the patient should pass his water in two glasses, and the second should be examined. The same applies to the female who generally should be catheterized, as the Doctor has said. The urine may be drawn in two glasses, and the first and second may both be examined. Pus and bacteria in the first, if none in the second, point to a urethritis.

Another thing which I think is helpful is the proportion of albumen to the pus in the urine. If you find a urine which is just a little hazy, but which contains pus and bacteria, and also a considerable quantity of albumen, you may be pretty sure the pus originates in the kidney. If you find the barest possible trace of albumen it is hardly possible you are dealing with a kidney lesion.

There is one exception that occurs to me, and that is an intermittent pyuria from hydronephrosis. There it is easy to make a mistake on a single examination for the urine may look perfectly clear, but if you watch the case long enough you will find pus.

Having formed a good opinion as to whether or not the kidneys are involved and whether or not you are dealing with a disease limited to the lower urinary tract, you are still in the dark. Your pyuria may be due to a number of things. The next step that seems to me the most important is to determine whether or not the patient carries a residual urine. If he does, it is idle to make a diagnosis of ordinary cystitis without further examination.

As the Doctor has said, when the case does not respond to simple methods the cystoscope should be employed. It is surprising to see how much trouble will result from very small lesions in the lower urinary tract.

I remember a case of a woman who lived thirty miles from town, and it was torture for her to come into town at all with no opportunity to pass water; yet her urine was clear and free from albumen and pus. A careful cystoscopy revealed a little polyp of the mucous membrane about the size of a grain of wheat, attached to one end, and floating free. One flash of a high frequency current was sufficient to destroy it, which did not entirely relieve her symptoms; another similar growth was found along the course of the urethra. These cases, in women especially, will often repay a most careful cystoscopic examination.

DR. NEIL MOORE, ST. LOUIS: These cases of cystitis, or cysto-urethritis, really do tax our knowledge and ability at times as to treatment. They often have absolutely clear urine. Dr. Young was fortunate in finding a polyp as the cause of his case. There is also the so-called "elusive ulcer," referred to by Dr. Smith. In many instances we do not find anything except perhaps a contracted and inflamed urethra. Then we are at a loss to know what to do. In a great many cases I have had good results from dilating the urethra with the Kollman dilator followed with a bladder irrigation of some mild antiseptic solution. It is always worth our while to try. Often an application of silver nitrate is beneficial.

DR. CLINTON K. SMITH, closing: I appreciate the discussion which has been given this paper.

Dr. Young spoke of urethral polypi. They are a simple thing but may cause a lot of bladder distress. They are often the cause of extreme urinary distress. I have several times put a cystoscope in the bladder expecting to find a marked bladder lesion and was surprised to see a clear bladder, but I discovered a polyp in the urethra at the bladder neck which was the disturbing factor.

Dr. Moore mentioned the Kohlman dilator in these cases of irritable bladder. I wish to emphasize that method of treatment. I have found it very beneficial in some cases where one can rule out disease of the upper urinary tract and confine it to the lower bladder and the urethra. I am not clear on just why the Kohlman dilator is beneficial; perhaps it is by producing a local reaction. Anyway, the cases improve, sometimes very markedly, with one treatment, especially if followed by bladder irrigation with mercurochrome or other stimulating antiseptics.

SARCOMA OF THE BRAIN WITH SECONDARY ACTINOMYCES SIMULATING LETHARGIC ENCEPHALITIS

W. A. CLARK, M.D.

JEFFERSON CITY

Louis L., white, 42 years of age, cigarmaker by trade, but for the past year had been in the restaurant and hotel business. Of Jewish descent; family and previous personal history negative.

History.—He was working as night clerk at hotel during the month of December, 1919; went to work at 7 p. m. and returned home at 7 a. m. For two weeks he complained every morning on returning home of headache, principally over the region of the

left eye, which was almost blind from an attack of measles when a child and an operation for correction of a consequent strabismus. He would retire and sleep heavily until 5 p. m. when his wife would awaken him for his dinner. He never complained of headache in the afternoon but would rise and eat very heartily and again lie down and sleep until time to go to work. Two weeks after these symptoms, or on December 25th, 1919, he was not feeling well and remained at home for the next two weeks.

During this time he complained a great deal of headache and of weakness, but was not confined to bed and did not consult a physician. His family noticed that he was inclined to eat abnormally large meals during this period. He complained that he could not walk any distance because of weakness, and did not care to read as he said "he could not put his words together."

On January 8, 1920, his headache being severe, and the pain radiating down the left side of the face, he consulted a dentist thinking possibly his "neuralgia" was caused by his teeth. The dentist found nothing wrong with the teeth, and because the pain seemed localized about the antrum referred him to an oculist who illuminated the antrum and sinuses but could make out no trouble. On January 10th his head pains became exceedingly severe and I was called. His wife had noticed that he was drowsy and that he did not articulate well and was generally listless. A short time before my arrival he vomited as he had done once before during the week and his head pains immediately were relieved and were not complained of subsequently.

Examination.—The patient was a well-nourished man about five feet, five inches in height, weighing about 160 pounds. He was in a semi-stuporous condition with tendency to fall asleep when not talking but could be easily aroused and answered questions intelligently. His face had a peculiar mask-like expression and gave the impression of some involvement about the seventh nerve. Tongue was coated with a peculiar sticky, whitish material and the breath was so bad that nothing could describe it except "rotten." The pupils were normal, as were also all reflexes. Babinsky, patellar or plantar showed nothing of importance.

The bowels were distended with gas, and history of obstinate constipation for some days which by the way persisted through the sickness and was exceedingly difficult to manage. Wassermann reaction was negative, as also Widal; spinal fluid flowed from the needle normally and without evidence of pressure, and on examination gave a negative Wassermann with about 24 count.

At the date of my first visit, January 10, 1920, he was able to speak so as to be easily understood, but his articulation gradually decreased and after a few days he made no effort to pronounce words right and would reply to questions in a very indistinct whisper. This whispering voice and frequent movement of the lips without a whisper persisted for the next two weeks, often though only when he was aroused by questions asked in a loud tone of voice.

He took some nourishment but seemed to have no desire for food, and only took what was brought to him and very little of that. He would immediately fall into a heavy sleep with loud breathing and continue to sleep for many hours without awakening. In fact, from January 10th to the 20th he slept practically all of the time, only rousing up about 4 a. m., and became partially awake, at which times he seemed restless and gave evidence of some pain in the head.

On January 20 he had a convulsion which lasted only a few seconds and passed off, leaving him in a somewhat restless state. For three or four days

*Read at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

following this he was exceedingly restless, tossing about on the bed and requiring constant attention to keep him from falling to the floor. When aroused from his sleep even before the convulsion, he would yawn as though still exceedingly sleepy. Hiccough was very troublesome during the entire sickness and almost invariably arose when anything entered the stomach, even water. On January 24 his restlessness quieted down and he again fell into a deep sleep. His pulse became rapid, breathing more laborious and on January 29th he died.

Macroscopic Examination.—The chief lesion is an obvious tumor growth, for the most part fairly circumscribed, located in the lateral ventricle of the left cerebrum. The tumor fills completely the pars centralis of the ventricle, and swinging around the thalamus, occupies a portion of the anterior and inferior cornua, but does not reach into the posterior cornu. The unoccupied portion of the inferior cornu is greatly and irregularly dilated. The dimensions of the tumor are somewhat roughly 4.5 cm. in the antero-posterior diameter, 5 cm. in the transverse and 3 cm. in the vertical. It distends rather than encroaches upon the walls of the ventricle save for its ventral surface, which definitely invades the temporal lobe in its posterior half behind the inferior cornu of the ventricle. The ventral portion of the tumor, unlike the dorsal half, which is solid within the ventricle, consists of discrete nodules separated by white matter, and these extend down through the gray matter practically to the surface of the inferior temporal gyrus. The tumor has a white glistening appearance, except that it is abundantly speckled both by numerous hemorrhagic points and by others of a bright yellow color. It exhibits a few foci of necrosis. The choroid plexus is entirely lost in the tumor with the exception of the anterior portion.

In addition to the tumor mass, there is a large, irregular lesion of colliquative necrosis, located in the posterior half of the cerebrum, and embracing in depth approximately its middle third. While superior and external to the tumor in the parietal lobe, and macroscopically apparently distinct from it, so that invasion was not suspected, the necrotic area closely approximates it in places. This lesion, the most of which washed out when the cerebrum was opened, extends posteriorly into the lateral inferior portion of the occipital lobe, and reaches anteriorly to the posterior margin of the lentiform nucleus and the cortex of the posterior insula. The necrosis is limited to the white matter, except that sinuses open into the Sylvian fissure, the superior temporal gyrus, the occipital lobe and the parietal lobe. This accounts for the slight exudate and the small areas of necrosis which are noted externally in the places mentioned.

The tumor mass and the superimposed necrotic lesion, so far as the naked eye can judge, encroach upon the posterior portion of the temporal lobe, a small portion of the superior temporal gyrus, the lateral inferior occipital region, the greater part of the posterior thalamo-cortical fibers, the inferior half at least of the optic striations, the posterior portion of the amygdaloid nucleus and slightly upon the posterior portion of the thalamus and lentiform nucleus. It misses the internal capsule.

The remainder of the brain shows no gross lesions externally or internally. The brain weight is 1,583 grams, or 226 grams more than the weight of the average male brain.

Microscopic Examination.—Sections from both the more circumscribed tumor and the edges of the necrotic lesion show a mixed cell sarcoma, mainly of the large spindle cell type. Even in the more necrotic part, there are numerous low power fields wholly of sarcoma. The edges of the necrosed part particularly are, however, complicated by the pres-

ence of a definite inflammatory reaction. The same reaction, as indicated by the presence of polymorphonuclear and lymphocytic leucocytes, with focal abscesses, is also present in the primary tumor in less degree. In addition there is some reaction of the fibrous tissue cells of the epithelioid type, occurring especially around the blood vessels, and best seen at the margin of the necrosis. Moreover, a few definite though irregular epithelioid cell tubercles occur, together with the occasional formation of giant cells. Even with the sarcoma complication, the histologic complex is characteristic of certain forms of the infectious granulomata.

Many of the vessels within the tumor were found to be filled with infective thrombi, and surrounded by a zone of leucocytic infiltration. The thrombosis was also verified in the gross to affect the vessels entering the choroid fissure, which give the essential blood supply to the affected parts.

Even under ordinary stains, a filamentous type of organism is visible, and by the positive Gram stain it appears in characteristic thread-like and branching form, with frequent clubbed ends, both thickly scattered and in focal clumps. The minute yellow foci of the macroscopic description can be identified with these clumps. The study of the organism was limited to the sections, as the gross diagnosis indicated no particular reason for making smears. While the clumps, as thus cut in thin sections, lack the complete ray-like arrangement of clumps pressed between cover glasses, they show nevertheless the projecting clubbed ends, some radiation from a central mycelium, and the numerous central coccus-like bodies of actinomycetes. Further, from the gross yellow points, the anaerobic conditions of growth, and the greater thickness of the filaments (at least three micra, and visible under low power), the probabilities all appear to be in favor of an actinomycetes rather than a nocardia infection.

Relation of the Lesions.—The primary lesion was undoubtedly the brain tumor. In its secondary extension in nodular form to the white matter of the temporal lobe and in more disseminated fashion to the white matter of the parietal and occipital lobes, it involved more or less the whole affected part. From the manner of its location within the lateral ventricle, its typical connective tissue and not gliomatous character and its association with the vessels of the choroid plexus—vessel walls being the only mesoblastic structure in that location—it is deduced that the sarcoma had its origin from the walls of the vessels of the choroid plexus.

Probably, the compression of the growth on the lumina of the vessels and the invasion of the vessels by the tumor cells contributed to some thrombosis and infarction, or the compression of the vessels alone led to some anemic softening of the parts supplied. The deficient oxidation thus produced became in turn the condition necessary for the growth of the invading anaerobic actinomycetes. The infection led further to complete infective thrombosis of many vessels and the portions thus completely infarcted resolved themselves into colliquative necrosis. To this liquefaction the bacterial growth probably contributed.

The actinomycotic infection displayed itself nowhere except in the tumor region. There was only a slight lymphocytic infiltration in cortical sulci except where the infection broke through the cortex in several places. The conditions were suitable for a known anaerobe and a known anaerobe was present—the findings completely complement each other, and attest the secondary character of the actinomycotic infection. The gray matter of the involved part was spared because of its independent cortical blood supply.

Anatomical Diagnosis.—Mixed cell sarcoma of the

choroid plexus of the left lateral cerebral ventricle; sarcomatous invasion of the white matter of the posterior portion of the left cerebrum; secondary actinomycosis infection with granulomatous reaction superimposed on the tumor region; thrombosis of the choroid vessels with partial infarction and irregular colliquative necrosis of the white matter of the same region.

The several processes together involved irregularly internal portions of the occipital, parietal, and temporal lobes, but so far as could be judged by the naked eye, affected no dynamic nuclei save the amygdaloid to much extent and no specific fiber tracts save the posterior thalamo-cortical fibers and the inferior half of the left optic striations, and slightly upon the posterior portion of the thalamo and lentiform nucleus.

The case was diagnosed from the physical symptoms as one of lethargic encephalitis and the rather unusual pathological findings which were so carefully worked out by Mr. Collier of the pathological branch of the Department of Preventive Medicine of the State University at Columbia, has made it seem to me to be worthy of being reported.

DISCUSSION

DR. FRANK R. FRY, ST. LOUIS: This is a nicely worked case, both from the clinical and laboratory side.

In cases of epidemic encephalitis, lethargy is not due to an increased intracranial pressure, but to the regions or special localities invaded by the encephalitic process. This fact came out early in the pathological work in Europe in the epidemics occurring there prior to the time we saw it in this country. The encephalitic processes invading the region of the central ganglia is the cause of the lethargy. The careful microscopical work in Dr. Clark's case enables us to form a theory, namely, that there was in the vicinity of the central ganglia an inflammatory reaction simulating that of many cases of lethargic encephalitis. In these cases the lethargy is often mistaken for mere stupor. There is a distinct difference between the two, as this case I believe well illustrates.

DR. ANDREW L. SKOOG, KANSAS CITY: The question of localization is always of a great deal of interest in any pathological lesion in the brain, whether it be a tumor or a localized inflammatory process. An epidemic encephalitis is a somewhat localized inflammatory disease of the brain. It involves the brain stem. Dr. Wilson suggested we use the name "peri-aqueductal disease"—which is, distributed around the aqueduct.

Writers call attention to involvement of the central ganglia. It is of keen interest to note that this lethargy should be distinguished from stupor. It seems that the state of so-called somnolence referred to by Dr. Clark might be classified as stupor. It came on gradually and increased. In the vast majority of cases of epidemic encephalitis there is somnolence which increases and then decreases, unless death occurs. Actinomycosis of the brain is extremely rare, and wherever reported lesions have been found elsewhere in the body.

DR. CLARK, closing: Because we could not find the things we set out to find to account for the clinical symptoms, it made me feel that the condition was sufficiently out of the ordinary to be worthy of report. To those who have seemed in the discussion to doubt the character of the tumor, I can only say that it was a carcinoma, if we

can rely on a pathological examination in any case, and because it did not give the clinical symptoms that we would expect to find in such a condition, and further the unexpected find of the actinomycosis induced me to bring it before this body.

BURNS*

HERMAN E. PEARSE, M.D.

KANSAS CITY, MO.

During the thirteen years that I have been Attending Surgeon to this hospital I have noticed that the patients who have died of accidental burns or who have been seriously sick with extensive burns have died or have been in danger of dying (1) from shock; (2) from a complication of (a) pneumonia, (b) peritonitis, (c) pleurisy, (d) meningitis, (e) duodenitis with ulcer, (f) nephritis; (3) from septic poisoning following extensive sloughing of tissue.

The most fatal burns are those of the trunk. The slowest to heal are electrical burns. The most painful seem to be from gasoline. The worst sloughs seem to be from steam scalds.

How do the complications arise? Why the list of pneumonia, pleurisy, peritonitis, meningitis, duodenitis and nephritis? I will answer as plainly as I can. All injuries from physical agencies have a primary phase, the direct effect of the accident in which death comes from shock. In the case of burns it may be suffocation, or coagulation of blood from heat, or a combination of these causes. Then, when the primary cause is no longer operative, comes a class of agents that are secondary. They are bacterial invasion and the toxins from bacterial inflammation. They are also the protein from dead tissue and the toxins from decayed tissue, and dead tissue absorbed into the blood and lymph. Here then we find the cause of the complications. These poisons are eliminated partly by the kidneys and they poison the kidney and produce nephritis. They are eliminated by the lungs, and they poison and infect the lung tissue and through it the pleura. By way of the liver they poison the peritoneum. By the blood stream they infect the gastric and duodenal walls. Thus our complications are shown to be secondary and septic.

The treatment of burns is all important. This man so extensively burned was caught under his overturned truck and slowly roasted by burning gasoline and oil. You see here burns of the first degree—simply redness—erythema. You see about the neck deeper burns second degree burns, with blisters. You see on the breast, shoulders and arms still

*A clinical lecture delivered at the General Hospital, Kansas City, Mo., March 9, 1921.

deeper burns, burns of the third degree with destruction of the true skin and deeper tissue. You see these because our patient is not bandaged. Bandages and gauze have little place in the dressings of burns. Only in the burns of extremities, where the erythema or blisters can be protected by a bandage and the patient be up and go about, are they of much value. And so instead of applying gauze, or ointment or salve on gauze, which will absorb the discharge and become wet and septic, we apply our drug, cover it with a rubber or oiled silk protective and leave it alone.

Treatment then is of three kinds: First, what we shall put on—drugs—a lotion, a powder or a salve or ointment; second, with what shall we protect the part; third, relieve the pain and promote health, relieving the various complications that arise.

Drugs.—Oils are the oldest and most ready at hand. Vaseline, Carron oil (equal parts of linseed oil and lime water shaken together to a soft emulsion), cream or lard. These are most valuable in the erythemas (first degree burns) and in the mild blisters (second degree burns) soda is valuable. Use it as a lotion dissolved in water or as a paste with water or as a mass of powder directly applied. Picric-acid is very valuable. It is cheap, quickly prepared, antiseptic and has a specific action on burns. Dissolved in a large bottle of water, a little makes a lot of bright yellow lotion. Picric acid is composed of the union of carbolic acid and nitric acid and its chemical name is trinitrocarbolic acid or trinitrophenol. It is best applied as a lotion or a spray; the solution should be saturated.

Boric acid is good used as a dry powder. In fact, boric acid is good for many wounds. A few weeks ago you saw here a man shot through the body. The ball was fired by one of our Kansas City bandits when the poor victim, a storekeeper, refused his demands for cigarettes. The ball entered just to the left of the root of the penis, missed the urethra, ranged downward and backward through the upper scrotum, missed the vas deferens and the testicle, passed out and on into the thigh, missed the femoral vein and artery and lodged in the fleshy back part of the middle thigh. It was remarkable for what it missed. It was late at night. The urine was not bloody. The wound could not be well protected by gauze alone so I emptied a half pound of boric acid all over the wound, mons pubis and scrotum, covered it with a loose pad and applied a spica. We obtained a primary union and the hematomas were safely absorbed. So much for a digression from burns but a tribute to boric acid.

Alum, the good old standby, does not fail us here. An ointment of alum and vaseline

(this is about what unguentum is) or an ointment of boric acid, alum and vaseline is fine. Use the alum about 10 per cent. to 15 per cent. Use the boric acid about the same, 15 per cent.

A while ago I told you we did not use much dressing and bandaging in the treatment of bad burns. These lotions and ointments that I have given you can be applied to wounds of the first or second or third degree, wherever in your judgment they best belong. Having applied them we do nothing more. If the patient is severely burned over the whole body we lay him on a sterile sheet and with a wire, or wooden hoop, make an arch over the patient and cover the arch with another sterile sheet. Arrange for a little ventilation and if the weather is cold, or extra heat is needed, a few large electric bulbs burning in the tent near the patient's body will keep the temperature right. This open treatment of wounds allows the discharge to drain away and the best possible condition to pertain around the wound and also allows the daily inspection of conditions and does not subject the patient to the dangers of the dressing wet with a lot of discharge.

In the fall of 1920 Dr. Binnie read at St. Louis a paper on "Odds and Ends of Surgery" in which he paid his respects to this open treatment of burns and strongly advocated its use. The paper was read, I believe, at St. Louis before the Missouri meeting of the American College of Surgeons. He told a story of a steamer carrying a large load of coolies as passengers in the Far East. There was a boiler explosion. Very many of the coolies were badly scalded or burned. There was a surgeon on board but as his supplies were strictly limited he was compelled to leave most of his patients with their burns exposed to the elements on the deck. To his delight and surprise the untreated patients did much better than those for whom dressings were available. The cause was evident. Exposure to the sun and air dried the injured areas and rendered them unsuited soil for bacterial cultivation. The well-known treatment by solutions of picric acid acts by killing surface bacteria, tanning the skin and thus preventing the egress of microbes from the deeper layers of the skin. It is the opposite of good farming; it on the one hand endeavors to destroy the seed or to prevent sowing; on the other hand it attempts to make the soil unfit for cultivation. The open air treatment of burns is along the same lines. Dr. C. C. Dennie, who had charge of the "mustard gas" burns in Base Hospital 28 in France, found that open air treatment with or without exposure to the rays or warmth of an electric light was the best treatment for these serious lesions. In

deep burns the open air treatment is liable to permit contractures to form and to cause deformities and disabilities. So in them some other method of treatment becomes necessary and with it means must be taken to apply some form of splint which will prevent contraction of the scar tissue as healing progresses.

It is doubtful in my mind if any amount of splinting however will prevent these contractures and it is probably better to heal the external wounds as quickly as possible, and if you see there is to be much defect to supply it by skin grafting, and then be prepared to cut the contractures after the patch has become normal and restore the deformities before they have made bone changes. It is very humiliating indeed to put a patient through the pain of splint wearing for 15 or 20 weeks, and then have the hand draw up, or turn into a contracture in the course of a few weeks after the splints are removed.

We have now gone over the immediate treatment of the patient with morphin and rest for the shock, and we have gone over the second item of treatment, what we shall apply and what we shall not apply, so we now take up what we shall do for the welfare of the patient himself.

In the shock following great burns morphin is our best relief. It is to be given freely enough to keep the patient rather insensible to pain. The next thing is to avoid the irritation of open nerve ends by applying either a paraffin spray as a protective, or applying some of the lotions or ointments given in the previous paragraph, covered with a protective dressing. The patient is laid on a sterile sheet and covered with another sterile sheet. We now call to mind the fact that the absorption of dead tissue, and the absorption of bacterial, poisonous toxins in the next few days will produce phlebitis, peritonitis, duodenitis, meningitis and so forth as the case may be. We shall therefore give our attention to the avoidance of these complications. Water in large quantities shall be given so that the toxins shall be diluted and the material passing through the kidney shall be so diluted with water it will not readily poison. The food should be of the most bland and non-irritating kind and should be preferably very largely a milk and a milk product diet, until the immediate danger of infections is over. Then a general diet may be used.

In so far as possible sloughs should be trimmed away whenever they occur, cutting with a pair of scissors through the tissue that is destroyed and consequently has no sensation. The application of picric acid, and the application of the various antiseptics contained in the previous paragraph will assist in the

chemical sterilization. Here the judgment of a good physician daily watching his patient, and being guided by the condition of the patient, is the best prescription. It is the patient that is to be doctored and not the burn after the first few days. In fact all the way through the patient has to be doctored carefully while the burn is being dressed or treated.

To summarize I would say plenty of morphin at the beginning, sterile sheets on which to lay the patient, application of picric acid in saturate solution, alum or boric acid with lime water and sodium bicarbonate, the dressing to be held in place by very light bandaging or none at all, the lotions to be sprayed on or painted on and the wound left exposed to the air, then the proper medical treatment by bland diet, and bland fluids and plenty of water and an abundance of anodynes covers about the entire field in the treatment of burns.

It is probable that all physicians will have more of these to treat from year to year as gasoline becomes a more common article kept about the house, and as electricity carried upon wires is taken farther and farther into the homes of the people. Therefore we should be ready to treat them, and treat them rationally and successfully, and be ready to give our patients reasons for our treatment.

¹ Rialto Building.

ORGAN STIMULATION BY THE ROENTGEN RAY.—William F. Petersen and Clarence C. Saellhof, Chicago (*Journal A. M. A.*, March 12, 1921), after animal experimentation have reached certain conclusions, among which are these: The roentgen ray, in proper dosage, has the property of stimulating cellular metabolism. When organs are selectively stimulated by roentgen rays, therapeutic results can be achieved either by direct stimulation, or an external secretion (the kidney) or of an internal secretion (the pancreas in diabetes). A second method of possibly influencing remote pathologic lesions lies in the mobilization of antibodies, enzymes and thromboplastic substances following selective organ stimulation. The effects on tuberculosis (irradiation of the spleen), an hemophilia and purpura can possibly be examined from this point of view with profit. It is probable that the indications of roentgen-ray therapy in the treatment of internal diseases will find marked extension if proper recognition is given the possibility of organ stimulation by such physical means.

UTERINE PROLAPSE.—W. Burton Thorning, Houston, Texas (*Journal A. M. A.*, July 9, 1921), describes a method of permanent fixation to the anterior abdominal wall by means of a strip of rectus sheath carried directly through the fundus. This procedure is not adaptable to more than a small proportion of the cases of prolapse. This method should not be employed if there is any question of malignancy or fibroids or in women in the child-bearing age, unless sterilized, or in badly infected uteri. This fixation will prove more generally satisfactory than any other method in women with typical enteroptotic figure with the slightly stooping shoulders, the flat chest, the flabby breasts, the pot belly and the broad hips.

THE JOURNAL

OF THE

Missouri State Medical Association

SEPTEMBER, 1921.

EDITORIALS

THE REFERENDUM ON THE MEDICAL COLLEGE BILL

The reports given out by the opponents of the referendum on the medical college bill, asserting that the referendum has failed, are not true. It is a fact that some names were found duplicated, a few persons having signed more than one petition by mistake, and of course those names must be counted off. There still remain a sufficient number of signatures to put the referendum on the ballot, although we must resort to litigation to protect those signatures. The defective ballots were found in petitions from St. Joseph and Platte City, in the fourth congressional district, where the number of signatures exceeded the legal requirement by only thirty-one names.

After the bill was signed by the governor the examining boards of some states discussed the question of withdrawing reciprocity privileges from Missouri, but they withheld action until after the vote on the referendum. If the law is upheld by the people, Missouri will undoubtedly lose reciprocity with practically all states. This confirms the opinion expressed when the bill was signed, although some of the attorneys in the General Assembly held that the state board of health would still retain its power to standardize medical colleges. It was this legal opinion and the concentration of efforts to defeat the chiropractor and hospital bills that led Dr. Bristow, after consultation with other physicians, to vote for the measure. Dr. Bristow had fought all these bills and succeeded in amending the medical college bill in the House so that the standards would not be lowered but, against his inclination and good judgment, he voted for the bill as it came from the Senate because that action seemed to promise success with other bills.

No member of the legislature gave greater attention to the work of the session than Dr. Bristow gave. Conscientious in the extreme, earnestly striving to act for the best interests of his people at all times, his high ideals were rudely shocked on more than one occasion during the sitting of the 51st General Assembly. The session was a nerve-racking experience even for younger members and to one who is approaching three score and ten years,

it was an exhausting period made more burdensome by his vote for measures that in principle he regarded as obnoxious.

Perhaps the result of the fight may have a salutary influence, for there is no doubt that the furore created by the discussion on the medical college bill has awakened the people to a realization, though dimly perceived by some of them, that a medical college must have a staff of competent teachers and a reasonable amount of modern equipment for turning out physicians before it shall be legally authorized to do so.

While the state board of health, according to the ruling of the attorney-general of the state, will have no right to regulate the schools the courts will have that authority, and, as we have said on a previous occasion, it cannot be doubted that the courts will require these schools to be properly equipped. One decision to that effect will have a more lasting and far-reaching influence than any regulation by the board.

An important lesson for us to glean from the experience is that the medical profession, especially the organized medical profession, must stand united and unanimous in its activities for or against a measure affecting either the rights and privileges of the licensed physician or touching the health of the people—a suggestion so trite that its repetition would seem superfluous except for the fact that the example before us compels serious attention to this thought.

THE SITUATION IN ILLINOIS

The medical practice act in Illinois adopted in 1917 has been declared unconstitutional and the law of 1899 becomes operative. This decision of the supreme court of Illinois was rendered in the case of a chiropractor named Love against the State Department of Education and Registration, which had refused to license Love as a drugless healer because he had graduated from a school giving a two-year course of instruction, whereas the Illinois law required a four-year course of instruction for those seeking a license to practice any system of treating human ailments without drugs. It was shown that no chiropractor school gave a four-year course, and that the law affecting applicants to practice medicine and surgery in all branches merely required the applicant to be "a graduate of a medical school deemed reputable and in good standing at the time of graduation." This discrimination against drugless healers was declared unconstitutional and the entire article affecting the licensing of all kinds of practitioners was declared invalid. Illinois must,

therefore, revert to the law of 1899 in licensing practitioners until a new act can be passed by the next session of the legislature. Whether the decision will affect the reciprocity law with other states remains to be seen.

Every thoughtful person will acknowledge the justice of the decision of the Illinois supreme court in this case. The framers of the 1917 act which contained other obnoxious features besides the one noted "overlooked their hands." Says the court in rendering the decision:

"We are not prepared to hold that requiring four years' professional education before a chiropractor or osteopath is allowed to practice his profession is unreasonable or unjust. Such a question is a question for the legislature, and the legislature is presumed to have investigated the question for itself in ascertaining what is best for the good of the profession and for the people among whom such profession is practiced, but the legislature cannot discriminate against chiropractors or osteopaths as to the time of professional education required, where no reason can be perceived for such discrimination. The act itself discloses clearly that there is an unjust discrimination against chiropractors and osteopaths. Surely there is no reason for providing that the limited professional education of one class of physicians shall be greater or for a longer time than that for those practicing medicine and surgery in all their branches."

Commenting editorially on this decision the *Journal of the American Medical Association* says:

"Most states have excellent laws regulating the practice of medicine, but the constitutionality of many of these laws has not been tested in the courts. Thanks to the chiropractors, not only are these tests being applied, but the decisions rendered are tending to show more clearly what constitutes the practice of medicine. The decisions also serve to emphasize the necessity of a basic scientific training for the practice of the healing art. A more vigorous enforcement of medical practice laws will naturally be vigorously contested in some instances. Those interested in scientific medicine, however, need not fear the final outcome of these tests. Chiropractors have been unhindered in their practice for so long that they have come to consider themselves immune from medical practice laws, as well as exempt from the educational qualifications recognized as necessary for the safe and efficient practice of the healing art. Any law which restricts them, therefore, is declared to be 'a discrimination,' and on that claim they undertake to have the law declared unconstitutional. In fact, the available evidence indicates a nation-wide campaign to invalidate medical practice laws. Supreme court decisions have recently been handed down in two states. In Illinois, a faulty wording of the law was found and the practice act was held

to be invalid. In Ohio, however, the decision not only upheld the constitutionality of the practice act, but also clearly set forth the principles underlying the practice of medicine and threw an important light on faulty decisions by other courts. The sooner the various questions pertaining to the regulation of the practice of medicine are tested out in the courts, the better. If the phraseology in any practice act is faulty, that fact should be promptly pointed out. The tests should be applied also to the laws establishing separate boards for certain groups of practitioners and lower educational standards than are required of physicians. These laws are clearly class legislation and discriminate against physicians. Just as soon as the basis and essential needs are presented to the judiciary, an outcome favorable to education and common sense will be assured. So far as medical practice laws have been carried to the national supreme court, the decisions have swept aside false theories and revealed the necessity of scientific training for those who undertake to practice the healing art."

SURGICAL MEETING AT ST. LOUIS

Under the presidency of Dr. Henry Schwarz, of St. Louis, the American Association of Obstetricians, Gynecologists and Abdominal Surgeons will meet in St. Louis Tuesday, Wednesday and Thursday, September 20, 21 and 22, at the Hotel Statler.

The association was founded in 1888 as the American Association of Obstetricians and Gynecologists, the object of the association being to cultivate and promote knowledge relating to abdominal surgery, obstetrics and gynecology. Among the founders were Drs. Norman B. Carson, Frank H. Glasgow and Gratz A. Moses, of St. Louis. The present name of the association was adopted at Atlantic City in 1920 because the proceedings included a considerable number of papers on subjects pertaining to abdominal surgery. The association is composed of surgeons devoting themselves exclusively to the specialties represented in the title of the organization, and its membership is limited to one hundred and fifty members.

This will be the third time that the association has met in St. Louis since its organization, the first meeting being held in 1892 in the old Lindell Hotel under the presidency of Dr. L. S. McMurtry. At that meeting the late Dr. L. Ch. Boisligniere, of St. Louis, was elected an Honorary Fellow, and the following Missourians were elected Fellows: Drs. A. H. Cordier and Willis P. King of Kansas City, A. B. Miller of Macon, W. B. Dorsett, B. M. Hypes, G. F. Hulbert of St. Louis.

The next meeting held in St. Louis was in 1904 when it was one of the large number of medical organizations that convened in St. Louis during the World's Fair. Dr. Walter B. Dorsett, of St. Louis, was president at that time and the Honorable D. R. Francis delivered the address of welcome. The sessions were held in the Hotel Monticello, now the Buckingham Annex. At the present time the following Missouri physicians are Fellows: Drs. H. S. Crossen, E. Lee Dorsett, Oscar H. Elbrecht, Ernest Jonas, Walter C. G. Kirchner, Francis Reder, G. D. Royston, Henry Schwarz, Otto Schwarz, of St. Louis; G. C. Mosher, of Kansas City.

Fellows residing in the community where the meeting is held are not placed on the program to read papers but the association has invited Dr. George Gellhorn and Dr. Fred J. Taussig of St. Louis, to read papers at the St. Louis session.

On Tuesday evening, September 20, Dr. John O. Polak, of Brooklyn, will deliver an address at the St. Louis Medical Society on "A Study of the Pathology and Clinical Picture of Ectopic."

An informal reception will be given by Dr. and Mrs. Henry Schwarz at their residence, 4397 Westminister Place, on Tuesday evening, September 20, and the St. Louis Fellows will entertain the members at luncheon at the University Club on the same day. The annual banquet of the association will be given Wednesday evening, September 21.

The secretary of the association, the venerable Dr. E. G. Zinke, of Cincinnati, for many years professor of obstetrics and clinical gynecology and now professor emeritus in the College of Medicine of the University of Cincinnati, and a former president of the association, will answer any inquiries concerning the coming meeting.

Missouri physicians desiring to attend the sessions will be welcome.

just been organized, covering the states of Arkansas, Oklahoma, Nebraska, Colorado, Texas, Missouri and Kansas, will hold its initial meeting. Dr. Hugh Cabot, Professor of Surgery at the University of Michigan and one of the early members of the American Urological Association, will be the guest of honor at this meeting and will deliver an address. The officers of this branch are Dr. E. G. Mark, President; Dr. Clinton K. Smith, Secretary.

On October 25 and continuing through October 28, there will be a joint meeting of the Medical Association of the Southwest and the Missouri Valley Medical Society. Beginning on the morning of October 25 and continuing through October 29, there will be clinics at all the recognized hospitals from eight to twelve. The afternoons will be devoted to joint meetings of the two societies, who will have as their guests Drs. Victor C. Vaughn and Hugh Cabot. The addresses of Dr. Vaughn and Dr. Cabot will be delivered on Wednesday evening, October 26. On Monday evening, October 24, there will be dinners given by both the Southwest Branch of the American Urological Association and by the Midwestern Association of Anesthetists.

The clinics have been so co-ordinated as to cover every line of work without confusion and admittance will be by ticket only.

The Mid-Western Association of Anesthetists will also hold its organization meeting during this period. This organization is composed of physicians, dentists and research workers interested in extending knowledge concerning anesthesia. Dr. R. M. Waters of Sioux City, Iowa, is president and Dr. Morris H. Clark, of Kansas City, is secretary of the organization committee.

Reunion banquets and numerous entertainments will furnish opportunity for those attending the meetings to enjoy the hours not occupied by scientific work.

CLINIC WEEK AT KANSAS CITY

The week of October 24-29 will be notable for the number of medical organizations holding their sessions in Kansas City, and the arrangements that will be made for clinical demonstrations during the six days when the following societies will hold their meetings: The Medical Veterans of the World's War, The Medical Society of the Missouri Valley, The Medical Association of the Southwest, The Mid-Western Association of Anesthetists, The Central States Orthopedic Club, Southwest Branch American Urological Association.

On October 24 the Southwest Branch of the American Urological Association, which has

NEW COUNTY HOSPITAL

On June 30 the Callaway County Medical Society was host to the physicians of the surrounding counties, the occasion being the opening of the new hospital for Callaway County at Fulton. The invitation was accepted by a number of physicians, the counties of Audrain, Boone, Cole, and Warren being specially well represented, and Drs. P. G. Hurford, M. A. Bliss, and Walter Baumgarten from St. Louis; the number present, including most of the local members of the Society, was forty physicians.

After inspecting the hospital, which was pronounced to be complete and up to date,

the guests with the local members assembled at the Fulton Country Club, where most of them engaged in social intercourse on the verandas of the club house, but the golf enthusiasts took to the links and played several rounds. At seven o'clock dinner was served at the club house, Dr. J. B. McCubbin, president of the Callaway County Medical Society, acting as toastmaster. A number of letters and telegrams of congratulation from distant physicians unable to attend were read during the dinner. Dr. P. G. Hurford of St. Louis gave an entertaining and humorous address interspersed with many amusing incidents and jokes. Dr. M. A. Bliss of St. Louis spoke along neuro-psychiatric lines and gave an entertaining and informing address.

The Callaway County Hospital is the second one in the state to be erected under the new law authorizing counties to vote bonds for general hospital purposes. The grounds and building cost \$120,000. Much of the furnishings and equipment were provided by private subscriptions, about \$10,000 being raised by individuals and societies for that purpose.

The hospital was opened for the reception of patients on July 1 and within ten days it was filled to about half of its capacity. On July 12 the physicians of the county met and organized a staff, electing a chairman, vice chairman, and secretary. They also adopted rules and regulations governing the work and relations of the staff to the institutions along the lines recommended by the American College of Surgeons.

This hospital seems destined to be and doubtless will become a very important factor in the care of the sick and injured of Callaway County.

INTERNATIONAL CONGRESS OF EUGENICS

The Second International Congress of Eugenics will be held in New York City, September 22-28, 1921. The meeting will be divided into sections with an extensive program for each section.

In section one will be presented the results of research in the domain of pure genetics in animals and plants, and studies in human heredity.

The second section will consider factors which influence the human family and their control; the relation of fecundity of different strains and families and the question of social and legal control of such fecundity; also the differential mortality of the eugenically superior and inferior stock and the influence upon such mortality of special factors, such as war and epidemics and endemic diseases.

The third section will concern itself with the topic of human racial differences, with the sharp distinction between racial characteristics and the unnatural associations often created by political and national boundaries.

The fourth section will discuss eugenics in relation to the state, to society and to education. It will include studies on certain practical applications of eugenic research and on the value of such findings to morals, to education, to history and to the various social problems and movements of the day.

In connection with the Congress, an eugenics exhibition will be held September 22 to October 22, in the Forestry Hall of the American Museum of Natural History. It is desired to secure the most striking exhibits available or which can be prepared for this purpose. While the exhibits must be able to withstand the test of professional scrutiny, still they should be of a nature which the man of ordinary intelligence and education, but without special scientific training, may readily comprehend and appreciate. Provision will be made for exhibiting displays of highly technical work, but the popular aspect will be given the preference. Charts, maps, pictures, models and scientific apparatus are considered proper means for displaying and demonstrating eugenical facts and principles, but any other kind of display material which any particular exhibitor cares to offer will be most carefully considered.

Active members will have the privilege of attending all sessions of the Congress. Address all communications to Dr. C. C. Little, Secretary-General, 77th St. and Central Park West, New York City.

DR. ARD APPOINTED STATE PSYCHIATRIST

The recently appointed board of managers of the state eleemosynary institutions has selected Dr. George P. Ard of the United States Public Health Service, serving at St. Louis, to the important position of health supervisor and he will have direct supervision of all the institutions under the control of the board. The choice of Dr. Ard was unanimous and his appointment was indorsed by the Neurological Society of St. Louis. Dr. Ard is well equipped to execute the duties the position places upon him, having had training with Dr. Adolph Meyer of Baltimore, in the state hospitals of New York, and in the psychiatric service in the army. Dr. Ard will take charge about September 1 and will have full control of the staffs of the various state institutions.

NEWS NOTES

DR. W. H. BREUER has been reappointed surgeon to the Federal Soldiers' Home at St. James.

DR. J. A. McCOMB, Lebanon, has moved to Springfield where he has become associated with Dr. W. R. Summers in the management of the Ozark Sanatorium for the treatment of nervous and mental diseases.

FIRE slightly damaged the office equipment of Dr. J. E. Jose, of Jefferson City, August 28. The fire started when a gas flame set fire to some loose papers at a time when Dr. Jose had left the office for a few moments.

DR. J. H. PARKER, of Steelville, has accepted the position of assistant physician at the East Louisiana Hospital for the Insane at Jackson, Louisiana. Dr. Parker was formerly assistant physician at State Hospital No. 1 at Fulton, and served in a similar capacity for several years in the State Hospital at Lapeer, Michigan.

THE 89th Division Medical Association, composed of the medical officers of the 89th Division who served during the World War, will hold its second annual reunion at Kansas City, October 28. Dr. R. H. Meade of Kansas City is President of the organization and Dr. Czar C. Johnson of Lincoln, Neb., is secretary.

THE Jewish Dispensary at St. Louis, located at 9th and Carr streets, has been closed and the patients formerly treated at the dispensary will be treated at the Washington University Dispensary. The Jewish Dispensary was closed because the lease on the building had expired and no suitable location was available for continuing the work. The service will be resumed when the new Jewish Hospital is completed.

DR. J. W. COKENOWER of Des Moines, Ia., is arranging a mid-winter cruise to the Mediterranean, Orient and European points. The Canadian Pacific S. S., "Empress of Scotland" (formerly the S. S. Kaiserin Auguste Victoria) has been chartered for the occasion. Reservations may be made now. A description of the trip will be sent to anyone interested. Address Dr. J. W. Cokenower, 306 Utica Bldg., Des Moines, Iowa.

IN the advertising pages of this issue we present the first announcement of the Midwest Training School at Kansas City, which has

successfully trained competent young women to fill positions of responsibility and trust for physicians' offices. Our members ought to be interested in this school, which is conservative in its methods and is conducted upon approved professional and ethical principles. See their advertisement on page III.

ARRANGEMENTS are being made for a special Pullman to leave Kansas City at six o'clock p. m. October 15, arriving in Chicago the next morning, and leaving Chicago on a special train at 10:15 a. m., October 16, for the meeting of the American Academy of Ophthalmology and Oto-Laryngology at Philadelphia, October 17-22, 1921. Anyone desiring reservations on this car should communicate with Dr. J. L. Myers, 626 Lathrop Bldg., Kansas City, Mo.

THE Medical School of the St. Louis University is erecting a new building in which accommodations will be afforded for the laboratories of physiology, pharmacology, and histology; it will also contain the administration offices, the library and reading room. The building will be three stories high on ground 50x20 feet. In addition to erecting the new addition the old building is being remodeled so as to give more adequate accommodations to other departments.

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Lederle Antitoxin Laboratories: Pollen Antigen-Lederle (Ragweed), Pollen Antigen-Lederle (Timothy).

The Abbott Laboratories: Argyn.
Hoffmann LaRoche Chemical Works: Papaverine Sulphate Tablets-Roche.

Nonproprietary Articles: Casein.

THE National Tuberculosis Association has appointed twenty-three consulting staffs, each staff to have charge of certain states, to whom will be referred questions affecting the tuberculosis situation and the activities of the National Tuberculosis Association. Dr. E. L. Opie, Dr. J. J. Singer, and Mr. A. W. Jones, of St. Louis, have been appointed to represent the Association in Missouri. Dr. Opie will advise on questions of clinical research, Dr. Singer on dispensaries, and Mr. Jones on publicity.

IN this issue we present two new full-page advertisements. One of them is an old patron with whom our members are well acquainted and will therefore be pleased to see their advertisement reappear in our Journal—the old

established pharmaceutical firm, E. R. Squibb & Sons. Their advertisement will occupy page IV opposite table of contents. The other firm is new to our Journal although it is doubtless well known to those who are interested in dentifrices, as every physician should be—the Pepsodent Company, manufacturers of Pepsodent Tooth Paste. Their advertisement will be found on page IX. Dentists regard Pepsodent as a thorough cleanser of the teeth, and we are glad to present their announcement to our members. We hope members will not fail to show their interest in these two new firms and patronize them when occasion offers.

AN attractive innovation in medical meetings has been undertaken by the Mississippi Valley Medical Association, to be held in St. Louis on October 13, 14 and 15. For this occasion a most unusual program, entirely free from the ordinary trite and formal medical paper reading, has been arranged.

Program participants have been carefully selected from eminent specialists among the leading authorities in the various fields of medicine. The preliminary announcements contain such names as Dr. Llewellys F. Barker, of Baltimore; Dr. Anthony Bassler, of New York; Dr. Chas. H. Frazier, of Philadelphia; Dr. John de J. Pemberton, of Rochester, Minn.; Dr. Isaac Abt, of Chicago; Dr. C. Jefferson Miller, of New Orleans, and others of equal prominence. These noted clinicians have accepted invitations to give scientific addresses (not papers) consisting of clinical demonstrations and discussions upon borderline subjects pertaining to their particular specialties. Because of their clinical bearing and wide medical scope, the subjects chosen will undoubtedly be of more interest to the general practitioner than to the specialist.

The third day of the program will be given over to clinics in the various St. Louis hospitals and universities, at which the guests of this Society as well as St. Louis physicians will participate.

The date of this meeting coincides with the Centennial Celebration and Pageant of St. Louis, which event will no doubt afford additional means for entertainment and social enjoyment to those attending this meeting.

Dr. William Engelbach, University Club Bldg., St. Louis, is Chairman of the Committee of Arrangements and will gladly answer inquiries requesting further information.

MEMBERSHIP CHANGES JULY AND AUGUST, 1921

NEW MEMBERS

Duffey, Hugh J., 3838 Troost Ave., Kansas City.

Fitzpatrick, Chas. M., Lesterville.
Gibson, Edward T., 1310 Rialto Bldg., Kansas City.
Hoffman, R. Lee, 1105 Rialto Bldg., Kansas City.
McCormick, Clarence J., 2602 East 15th St., Kansas City.
Miller, Wade Hampton, 608 Commerce Bldg., Kansas City.
Myers, Benj. Lee, 626 Lathrop Bldg., Kansas City, Mo.
Presnell, George W. H., Sikeston.
Rutherford, Orra L., Bellflower.
Steele, George, Lucerne.

THE FOLLOWING MEMBERS HAVE MOVED

Andrae, Robert L., City Hospital, St. Louis, to 1302 N. Euclid Ave.
Armour, W. A., 415 Argyle Bldg., Kansas City, to 3433 Paseo.
Baumgartner, E. A., Humboldt Bldg., St. Louis, to King, Ontario.
Belding, L. E., Howell, to St. Charles.
Binnie, J. F., 916 Rialto Bldg., Kansas City, to 619 East 46th St.
Boisliniere, L. C., 3605 Lindell Blvd., St. Louis, to 3700 Westminster Pl.
Bolton, Benj. M., Sioux City, Iowa, to St. Joseph Hosp., Patterson, N. J.
Bothman, Louis, 639 University Parkway, Chicago, Ill., to Address Unknown.
Braun, Harry E., Presbyterian Hosp., New Orleans, La., to Address Unknown.
Broderick, David E., 738 Lathrop Bldg., Kansas City, to Pratt, Kansas.
Bruton, J. W., Ozark, to Mount Vernon.
Butterfield, E. R., 3949B Magnolia Ave., St. Louis, to 618 S. Ashland Blvd., Chicago, Illinois.
Camp, George H., 5123 Westminster Pl., St. Louis, to 840 Landers Bldg., Springfield.
Chambliss, Edward L., 1111 Rialto Bldg., Kansas City, to 300 Gate City Bank Bldg.
Coats, C. C., 109½ N. 8th St., St. Joseph, to 716½ Felix St.
Cohen, Frank, Ill. State Bank Bldg., Quincy, Ill., to 211 Majestic Bldg.
De Menil, H. N., 3753 Cook Ave., St. Louis, to 4341 Page Ave.
De Vilbiss, E. F., 404 Bryant Bldg., Kansas City, to 910 Rialto Bldg.
Divine, Duke, 3034 Euclid Ave., Kansas City, to Edgerton.
Dixon, Otto Jason, 824 Lathrop Bldg., Kansas City, to 917 Rialto Bldg.
Earnest, Clarence E., 715 Bryant Bldg., Kansas City, to Clay Center, Kansas.
Egbert, T. H., Kennett, to Freedom.
Eddlemon, A. Gordon, Iantha, to Liberal.
Eubank, A. E., 722 Reserve Bank Bldg., Kansas City, to 300 Gate City Bank Bldg.

Forsen, J. S., Grey Bull, Wyoming, to Address Unknown.

Graham, T. E., 2119 North 12th St., St. Louis, to 1431 North 8th St.

Hallberg, John W., 721 Lathrop Bldg., Kansas City, to 638 Lathrop Bldg.

Heryford, W. B., Maryville, to 434 Holaday Ave., Portland, Oregon.

Hoxie, George H., 715 Bryant Bldg., Kansas City, to 1000 Rialto Bldg.

Jackson, Lewis L., Bernie, to Address Unknown.

Kuhlmann, F. C. E., Washington, D. C., to 6615 Kingsbury Pl., St. Louis.

Lieuallen, R. O., State Hospital for the Insane, Phoenix, Arizona, to Puyallup, Washington, Box 57.

Limbaugh, W. R., Hornersville, to Hayti.

McComb, J. A., Lebanon, to 812 Landers Bldg., Springfield.

McVay, James R., 333 Argyle Bldg., Kansas City, to 819 Rialto Bldg.

Miller, Wade H., 608 Commercial Bldg., Kansas City, to 744 Lathrop Bldg.

Parker, James H., Steelville, to East Louisiana Hospital for the Insane, Jackson, Louisiana.

Pollock, Max, 5827 Enright Ave., St. Louis, to 5794 Kingsbury Pl.

Prichard, James B., 1935 Park Ave., St. Louis, to 4004 Chouteau Ave.

Pugsley, Fred N., 3720 Wyandotte St., Kansas City, to U. S. Naval Hosp., Pearl Harbor, Hawaii.

Rhodes, E. L., Warsaw, to Lincoln. (Erroneously reported at Warsaw in a previous issue.)

Robertson, J. A., Wesley Hospital, Kansas City, to 300 Gate City Bank Bldg.

Schroeder, Walter H., 3023 Shenandoah Ave., St. Louis, to Box 148, Flat River.

Sharp, Benj. T., 1111 Rialto Bldg., Kansas City, to 300 Gate City Bank Bldg.

Sharp, Wm. L., Slater, to 2910 Kossuth Ave., St. Louis.

Sheldon, J. G., 1111 Rialto Bldg., Kansas City, to 300 Gate City Bank Bldg.

Shank, W. L., 1023 N. Grand Ave., St. Louis, to 3656 Washington Ave.

Smith, Geo. W., 1111 Rialto Bldg., Kansas City, to 300 Gate City Bank Bldg.

Son, E. R., California (Mo.), to Upland, California.

Tate, P. S., Farmington, to 5131 Minerva Ave., St. Louis.

Threadgill, J. M., 1050 E. Park Ave., St. Louis, to 1370 Clara Ave.

Trippeer, F. L., College Mound, to Ardmore.

Walker, H. Lynn, Address Unknown, to 11 Ave. du Bois de Boulogne, Paris, France.

Wheelon, Homer, 1402 S. Grand Ave., St. Louis, to 4327-11 N. E., Seattle, Washington.

Wyche, Chas., St. Louis, to 640 North Taylor Ave., Kirkwood.

NO LONGER MEMBERS

Blue, Arthur B., Hannibal.

Brockman, Henry H., Eldon.

Calvert, Howard A., Chickasha, Oklahoma.

Cobb, Benj. E., Lemons.

Cooper, James F., Hannibal.

Dangerfield, Virgil S., Luray.

Dice, Wm. H., Gentry, Arkansas.

Haynes, Lee, 901 Westport Ave., Kansas City.

Helms, James H., Iberia.

Leslie, Walter L., Russellville.

Mace, George R., Iberia.

Malley, John A., 1436 N. 5th St., Quincy, Ill.

McReynolds, W. C., Wyaconda.

Mercer, Ray, Quincy, Ill.

Riggs, John Max, Wayland.

Shanks, Archie L., 708 Birch St., Hannibal.

Shirley, Geo. H., Bagnell.

Sisson, Wm. B., Trust Bldg., Hannibal.

Smith, Clarence A., Monte Vista, Colorado.

Tinsley, James H., Merwin.

Wilson, Roy E., LaBelle.

DECEASED

Brown, Wm. Dickison, Carthage.

Christy, John M., Butler.

English, James H., Flat River.

Geeslin, Preston A., Kahoka.

Smith, George W., Henrietta.

Wilson, Dora Greene, Kansas City.

OBITUARY

HARRY J. CUMMINGS, M.D.

Dr. Harry J. Cummings, of St. Louis, a graduate of Trinity Medical College, Toronto, Ontario, 1889, died at his home in St. Louis May 15, 1921, from cancer, aged fifty-five years. He had been a resident of St. Louis for many years where he enjoyed the esteem of a very large circle of friends and was highly regarded for his professional attainments and his devotion to the tenets of the medical guild. A sufferer for a number of years from an incurable malady, Dr. Cummings nevertheless maintained a bright spirit of optimism and died mourned and honored by all who knew him. He was a member of the St. Louis Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association.

FREDERICK KOLBENHEYER, M.D.

Dr. Frederick Kolbenheyer, of St. Louis, a graduate of the University of Vienna, 1868, died at Omaha, Nebraska, April 8, 1921, aged seventy-eight years. Dr. Kolbenheyer practiced in St. Louis for more than twenty years, but had spent the last few years of his life with a daughter in Omaha. He was prominent in society and club affairs in South St. Louis, a student of philosophy and a writer on political topics. He was a member of the St. Louis Medical Society and the Missouri State Medical Association.

JAMES H. ENGLISH, M.D.

Dr. James H. English, of Flat River, a graduate of Missouri Medical College, 1890, died at his home July 12, 1921, aged fifty-five. For many years he practiced at Farmington, but later moved to Flat River. He was one of the most prominent physicians in St. Francois County but found time to give attention to public affairs in addition to his practice, having been elected coroner of the county for two terms and public administrator for one term. He was a member of the St. Francois County Medical Society and the Missouri State Medical Association.

DAVID L. PORTERFIELD, M.D.

Dr. David L. Porterfield, of Jamesport, a graduate of Washington University Medical School, 1906, was killed by lightning April 25, 1921, aged forty-two years. The untimely and tragic death of Dr. Porterfield removes from Daviess County one of the most successful and universally respected physicians in that section of the state. Dr. Porterfield was fond of hunting and with two companions was snipe shooting in the Grand River bottoms when a severe electrical storm overtook them. The bolt of lightning apparently entered Dr. Porterfield's body at the top of his head and ranged downward splitting his boots. The hair on his head was burned to a crisp and his hat was entirely consumed. Dr. Porterfield was a member of the Daviess County Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association.

DAVID F. HOWARD, M.D.

Dr. David F. Howard, of Brookfield, a graduate of Washington University Medical School, 1903, died at his home April 22, 1921, aged fifty-one years. He was a native of Missouri, born in Montgomery County, and practiced his profession in Brookfield during his

entire career. Born with the instinct of service that dominates the life of every true physician, Dr. Howard devoted his energies to the alleviation of the ills of his friends and neighbors, exalted his profession, and was loved and honored by his fellow physicians and fellow citizens not only for the good that he accomplished during his life but for the fortitude he manifested in serving others while himself a sufferer from a physical malady. For a number of years he was secretary of the Linn County Medical Society of which he had been a member almost from the time of his graduation in medicine, and was a member of the Missouri State Medical Association.

GEORGE W. SMITH, M.D.

Dr. George W. Smith, of Henrietta, a graduate of Barnes Medical College, St. Louis, 1893, died very suddenly at his home July 10, 1921, from apoplexy, aged fifty-five years. He practiced at Hardin, Ray County, for several years but in 1903 he moved to Henrietta, after having completed a post-graduate course at Georgetown University, and remained in Henrietta until his death. He was one of the leading citizens of Ray County, always in the forefront of any movement to improve the condition of the town and as a physician he held the confidence and esteem not only of his fellow practitioners but of a very large circle of friends and patients throughout the entire county. Not only was Dr. Smith a successful physician, but he was endowed with a talent for mechanical ingenuity far beyond the ordinary gift of novices, which he put into practical use in many ways, the most conspicuous being the construction of an aeroplane that he tried out successfully and the transformation of his buggy into a gasoline automobile when the motor car first proved practical. The buggy-auto, as it was called, was used very successfully by him in his practice. His death was a severe loss to his community and he will be missed by his fellow practitioners in Ray County and his friends in the medical organization. He was a member of the Ray County Medical Society and the Missouri State Medical Association and local surgeon for the Santa Fe and Wabash Railroads.

WILLIAM D. BROWN, M.D.

Dr. William D. Brown, of Carthage, a graduate of Rush Medical College, Chicago, 1884, died suddenly May 3, 1921, from a heart attack, aged sixty years. He was a sufferer from asthma and had been complaining of heart weakness for a week or two. When

the attack overtook him he was seated in his automobile observing the athletic exercises at the Mark Twain School track. Dr. Brown was a member of the Jasper County Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association.

The Committee on Necrology of the Jasper County Medical Society prepared resolutions on the death of Dr. Brown which were unanimously adopted by the Society. The resolutions follow:

WHEREAS, The Supreme Ruler has seen fit to suddenly take from our midst our esteemed brother member, Dr. W. D. Brown, of Carthage, on May 3, 1921, therefore be it

Resolved, That the members of the Jasper County Medical Society take this means of expressing to his bereaved wife and family their deep sympathy and assurance that we share with them their irremediable loss. Dr. Brown was an enthusiastic and skilled physician, a generous, friendly man. He took a lively interest in his profession, his church and matters of public interest, especially educational work. In his sudden death the community suffers the loss of a man who devoted his life to the alleviation of suffering and the preservation of the health of his fellow citizens. Surely, not quickly will one be forgotten whose very life was filled with good and kind deeds; and be it further

Resolved, That these resolutions be spread upon the minutes of this Society and a copy sent to Mrs. Brown.

R. N. STORMONT,

L. B. CLINTON,

H. A. LAFORCE,

The Committee.

RICHARD TERRELL MINOR, M.D.

Dr. Richard Terrell Minor, a member of the Missouri State and the Reynolds County Medical Societies, died at his home in Lesterville, Mo., February 11, 1921, aged 77 years.

Dr. Minor was born at Gales Hill, near Charlottesville, Va., on January 16, 1844. He received his degree of medicine from the University of Virginia, June 29, 1867, and began the practice of his profession in Charleston, West Virginia. In 1871 he removed to St. Louis and in December, 1874, he took out license to practice medicine in Iron County, Mo., but in a short time went West, taking the state board of health examination in Colorado and locating at St. Elmo in that state. He did not remain long in Colorado, returning to Missouri in 1883 and soon thereafter located at Lesterville, where he practiced until his death. He was a member of the Alber-

marle Light Horse, Co. K. Sec., Virginia Cavalry of Mumford's Brigade, in the Confederate Army during the Civil War. He was a member of the Medical Advisory Board of Missouri No. 46, during the late World War.

Dr. Minor was of the old school of physicians we do not often meet in this day of the specialist, capable, ready and willing to go at all times, meet emergencies of all kinds, and gave the best part of his life to his chosen profession. He was held in high esteem by his brother physicians in Reynolds and adjoining counties, being present at all Society meetings when possible and took great interest in the work. The Reynolds County Medical Society will miss his wise counsel and advice, while the good people of Lesterville and vicinity where he spent the best part of his life will find it hard to get a man that will take his place.

C. C. SIMMONS, M.D.,

A. T. BUGG, M.D.,

C. M. FITZPATRICK, M.D.,

J. R. PYRTLE, M.D.,

S. B. RALLS, M.D.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.

CARROLL COUNTY MEDICAL SOCIETY

The Carroll County Medical Association met in the Court House at Carrollton on July 20, at 1:30 p. m. The following members were present: Drs. Samuels, Colby, Cools, Kemp, Atwood, Musson, Scovern and Brunner.

Dr. Kemp, of Hale, gave a very interesting talk on "Summer Complaints of Children."

The subject was discussed by Drs. Colby, Samuels, Atwood, Cools, and Musson.

The following program was selected for the August meeting to be held on August 17, at 1:30 p. m.: Typhoid Fever, by Dr. Boss Brown, Bosworth.

Discussion to be opened by Dr. W. D. Colby, Norborne.

E. E. BRUNNER, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met on Wednesday, July 13, at Smithville, convening from 2 till 5 p. m. This was our first "day meeting" for several years. Those present: Dr. and Mrs. J. H. Rothwell, Dr. and Mrs. J. F. Rupe, Dr. and Mrs. J. E. Musgrave, Dr. and Mrs. W. N. Cuthbertson, Dr. and Mrs. F. H. Matthews, Dr. and Mrs. R. J. Woods, Dr. and Mrs. E. C. Hill, Dr. and Mrs. J. J. Gaines, Dr. E. H. Miller, Dr. W. S. Wallace, Dr. W. J. James, Dr. E. L. Parker, President.

Dr. and Mrs. E. C. Hill, ably assisted by Dr. and Mrs. Woods and Dr. and Mrs. Rupe, were our hosts on this enjoyable occasion. Miss Julia May Hill, Miss Ethel Wood and Master Howard Hill lent their sweet dispositions, willing hands, and charming personalities to make this a never-to-be-forgotten meeting.

The program committee "did themselves proud" by arranging attractions the like of which it has seldom been our pleasure to record. The palatial home of Dr. and Mrs. E. C. Hill was literally ours for the time. On a specious veranda possibly forty feet long was spread a dinner that defied even the dreams of an epicure. Plates were set for about forty people, and the country ham and fried chicken were not out of proportion to the expected number. Imagine if you can a bunch of twenty-five doctors and doctors' wives attacking a bill of fare arranged for forty Latitude? The word feebly expresses it.

Smithville is about one hour's exhilarating auto ride from most of the other places. And it's an appetizing road which leads the favored pilgrims thither, to arrive about 11:30 a. m. We have tried it and we know. If I should attempt to describe the dinner in detail I would be assuming a thing utterly beyond my power. So I will confine my imagination and descriptive ability into being sorry for other county medical societies that have no Smithville.



On the veranda of Dr. E. C. Hill's home, Clay County Medical Society meeting, Smithville, July 13. Photo by Miss Julia May Hill.

The scientific program was "off-hand" and characteristic of this good old organization. Dr. E. H. Miller opened with lore on the goiter gland, introducing some theories that were decidedly Milleresque and rich with experience and observation. Dr. F. H. Matthews spoke on "Fibroma of the Abdominal Wall," with reference to location, symptoms, especially complicating pregnancy. Dr. W. S. Wallace discussed "Osteomyelitis," supplementing his remarks with elaborate reports of cases from his own experience and with appropriate radiograms. Dr. J. H. Rothwell detailed at interesting length a re-

port of a surgical case in which he himself was the patient. Dr. Rothwell stated that he "felt like a two-year-old and expected to live to be a hundred," to which every soul present uttered a fervent "Amen." Dr. E. C. Hill, in closing, reported a case of multiple delivery, triplets, describing the psychic phenomena of the third arrival. The Doctor thanked the Society for bringing the meeting to Smithville and "hoped we'd come again."

A rousing vote of thanks closed the session. Next meeting, Kearney, last Monday in August, noon till 5 p. m. The chair named Dr. H. L. Tadlock, of Holt, and Drs. Rowell, Epler, and Hamilton, of Kearney, as program committee for another splendid session.

J. J. GAINES, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session in the office of Dr. W. F. Justice, at Lancaster, Friday, July 15, with the following present: Drs. W. F. Justice, B. B. Potter, J. H. Keller, A. J. Drake, W. H. Zieber, Jesse O. Coffey, Jr., H. E. Gerwig and J. B. Bridges.

The meeting was called to order by the president, Dr. W. F. Justice, at 2 p. m. The minutes of the last two meetings were read and approved.

A communication from the U. S. Army Chemical Warfare Service, concerning the deleterious effect of gas on the soldiers in the late war was read and the subject discussed. All members promised to report all such cases that came under their observation.

Dr. J. B. Bridges read a paper on "Herpes Zoster," which was received by the Society and discussed.

Dr. Jesse O. Coffey, Jr., of Queen City, made application for membership. The committee on credentials reported favorably and Dr. Coffey was elected to membership.

On account of the intense heat, the banquet that was to have been given at this meeting was postponed till the next meeting, October 12, the same committee on arrangements being retained, Drs. A. J. Drake, B. B. Potter and J. H. Keller.

Papers will be read at the next meeting by Drs. J. O. Coffey, Jr., and H. E. Gerwig.

There being no further business the meeting adjourned.

J. B. BRIDGES, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in the Masonic Hall at Norwood, Thursday afternoon, August 4, with the following members and visitors present. Drs. R. M. Rogers and J. A. Fuson of Mansfield, R. A. Ryan and L. F. Vannoy of Norwood, A. C. Ames of Mountain Grove, and J. E. Dewey and Paul F. Cole of Springfield. The meeting was called to order by the president, Dr. J. A. Fuson, and the minutes of the last meeting were read and approved.

Dr. Dewey gave a very interesting and instructive talk on kidney and bladder calculi and showed some specimen stones and X-ray plates illustrating the subject.

Dr. Rogers read a paper on thoracic aneurysm and described a case he had recently seen which ruptured into the lungs with immediately fatal result.

Dr. Ryan read a paper on rheumatism in which he touched upon the different varieties of the disease

and other diseases often mistaken for it, but more especially acute articular rheumatism, or rheumatic fever.

All the subjects were discussed by all present.

A letter was read from the War Department asking for the experience of the members with patients that were gassed in the army, and after a discussion of the subject it was agreed that many who claim to have been gassed appear to have suffered no appreciable injury therefrom, while others seem to have a condition of chronic bronchitis from which they will probably never recover, and that such cases are no doubt more susceptible to other lung diseases than normal persons are.

Dr. Cole was asked to make a few remarks about radium, but he only consented to answer a few questions, promising us a paper on the subject for our next meeting.

A vote of thanks was given to the two visiting physicians for their part on the program and they were made honorary members and invited to come again.

The meeting adjourned to meet at Mansfield, November 3rd.

A. C. AMES, M.D., Secretary.

BOOK REVIEWS

DISEASES OF WOMEN, INCLUDING ABNORMALITIES OF PREGNANCY, LABOR, AND PUERPERIUM. A Clinical Study of Pathological Conditions characteristic of the five periods of Woman's Life. Presented in One Hundred and Seventy-three Case Histories by Charles M. Green, A.B., M.D., Professor of Obstetrics and Gynecology, Emeritus, in Harvard University, Senior Surgeon for Diseases of Women, Boston City Hospital. With 12 full-page plates, one cut and 25 charts in the text. Boston: W. M. Leonard, 1920.

The appearance of this work attests to the growing interest in the "Case Histories" method of presenting medical opinion. This work is made up largely of the discussion of actual cases observed in the author's practice. The reader is not left to draw his own conclusion, but the author summarizes the lesson the experience has taught him. The eminence of the author makes these opinions valuable. To the beginner these cases may serve as anticipatory clinical experience and to the old campaigners they serve as a convenient means of comparison of opinion. To both they may be highly recommended.

A. E. H.

SURGERY, ITS PRINCIPLES AND PRACTICE. By William W. Keen, M.D., J.L.D., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume VII, illustrated. Philadelphia: W. B. Saunders Co., 1921, 855 p.

The seventh volume of this system was written for the purpose of bringing the work up from 1913 to 1921, to record the achievements of those engaged in the Great War and their contributions to surgical knowledge. It contains a very exhaustive chapter on gas gangrene, a subject which is of the greatest importance and was particularly so in the early days of the war because of the enormous number of cases. The chapter on tetanus is short, probably because, as is stated in the preface, so few cases were seen in any of the armies, a striking testimonial to the efficacy of the routine use of tetanus antitoxin as a prophylactic agent.

The chapters on organization and administration of the medical departments of the army and navy are very readable and instructive. Some idea may be gained from them as to the important part played by the Medical Corps in winning the war. The sub-

ject of war wounds is treated systematically and fully. It is a matter of regret that in chapter XV on surgical technic the author omitted the simplest and most practical method of preparing Dakin solution (sodium hypochlorite .05 per cent.) viz., by the passage of chlorine gas through sodium carbonate solution. A special apparatus is on the market by which a liter of the solution can be made in two minutes at a very small cost. This is the only method to be used where a large quantity is required.

Exception should be taken to a statement on page 421, chapter XVI, in a discussion of the operative treatment of simple fractures, viz.: "There is very little, if any, danger from operative treatment of a closed fracture if the surroundings are those of a modern hospital. . . . Such a procedure requires only an average degree of skill on the part of the operator." There are no cases which require more skill, judgment, or careful aseptic technic than these.

Chapter XVII describes the treatment of gunshot fractures by suspension in the Balkan frame and similar devices. The various methods of extension are discussed in detail. There is no doubt but that much better results can be obtained in fractures by the use of suspension, and in compound fractures the ease with which the dressings may be done without disturbing the fractured ends makes it the method of choice.

The chapters on orthopedic and neural surgery are very complete and contain much valuable information in regard to technic, splints, etc.

The book is printed in good clear type, on excellent paper and provided with a very complete index.

H. E. P.

THE WASSERMANN TEST. By Charles F. Craig, M.D., M.A., F.A.C.S. Second Edition, revised and enlarged, illustrated with colored plates, half-tone plates, and sixty-one tables, 1921, 279 pages. C. V. Mosby Co., St. Louis. Price, \$4.25.

The value of this book, or any other, depends upon the purposes for which it may be used. Craig's work will have very different values for the student, the practitioner the technician and the serologist.

For general information on many aspects of the Wassermann test and the examination of spinal fluid it is probably not surpassed. To him who seeks such information the book is recommended.

Technicians, who work independently of serologists, will probably receive the book with favor, for they will find the test so completely described that it may be made a simple mechanical procedure.

The serologist's attitude toward it will be one of discrimination; it will be that of approbation here, and of disapproval there.

The author gives prominent attention to his modification of the Wassermann test and to his personal views and researches. The reviewer fails to see that the author has made any contribution to the technic of the test which deserves to be dignified as original.

In the first edition, as well as the second, the author gives an argument favoring his modification in which he states "that there is no question regarding its accuracy and value in the diagnosis of syphilis." This statement was made after ten years of experience upon thousands of cases. At the end of this period the author introduced a modification to his test the importance of which he states "can . . . hardly be overestimated and the adoption of this procedure adds greatly to the accuracy of the technic . . ." Evidently the author should have revised his estimate of the test over the ten year period for the two quotations given above are not in harmony.

Craig's views regarding the influence of alcohol upon the Wassermann reaction and his belief that the Wassermann bodies in the blood serum are subject to very marked daily variations are widely known. The correctness of these views must stand or fall upon the correctness of the author's contention that the delicacy of the test in his hands is constant. This latter view must be rejected and hence the deductions regarding the influence of alcohol and the daily variations in the reactions are not accepted as well founded.

The following objections are offered to the Wassermann technic as performed by Craig: (1) The performance of the test with two tubes does not give sufficient information regarding the strength of the reaction. (2) The use of two tubes does not offer sufficient control over errors in adding reagents. (3) The units of complement and amboceptor are not what may be termed fundamental units. (4) The distinction between positive and negative reactions is not sufficiently marked. (5) The use of amboceptor paper introduces an unnecessary inaccuracy. (6) In addition to ordinary incubation with cholesterinized antigen, ice box incubation with a plain antigen is essential to the proper performance of the Wassermann test.

The fact of the paternal relationship of the author to the test which he advocates should be in the mind of the reader and due allowance should be made.

G. I.

THE RADIOGRAPHY OF THE CHEST. Vol. I. Pulmonary Tuberculosis. With Nine Line Diagrams and 99 Radiograms. By Walker Overend, M.A., M.D. (Oxon), B.Sc. (Lond.), etc. St. Louis: C. V. Mosby Company, 1920. Price, \$5.00.

This is the first volume of a series of monographs upon radiographic findings in pulmonary tuberculosis. The first chapter deals with The Normal Chest. Chapters two to seven inclusive take up the different classifications of pulmonary tuberculosis under appropriate headings. The book consists of 120 pages, together with 91 radiographic reproductions which serve to illustrate the case histories recorded under the various classifications. While the bibliography on page 116 is rather meager and the references to the bibliography inadequate throughout the text, nevertheless one notes a number of references with which our American literature is not familiar, especially the reference to "physiological and anatomical." Under "Complications of Pulmonary Tuberculosis" the author discusses pleurisy, pneumothorax, emphysema, hemoptysis, cavities, bronchiectasis and pulmonary tuberculosis in the great war. Under these various headings are grouped a number of observations of a general nature which could only occur to one who has had the opportunity of extended observation and numerous post-mortems. This book deserves a place in the library of every radiologist for study and reference.

E. H. S.

RATIONAL TREATMENT OF PULMONARY TUBERCULOSIS. By Charles Sabourin, M.D., Medical Director of the Durtol Sanatorium, Puy-De-Dome, France. F. A. Davis Company, Philadelphia, publishers. Price, \$3.50 net.

When we receive the translation of a French medical book, in the large majority of instances it presents a rather personal viewpoint of the subject it covers. This is natural enough. The ordinary routine textbooks are not objects properly for translation. But a book with a fresh viewpoint or a series of individual researches is. We have had some good translations of this kind from France. Janet's works on hysteria are among the best. The

present volume is among the worst. The author emphasizes quite properly the three essentials in the treatment of tuberculosis—rest, fresh air and food, but there is nothing new about either his facts or his manner of presentation. What can a reviewer say about a book, published in 1921 on the treatment of tuberculosis which says nothing about artificial pneumothorax, has only a few generalities in a page or two about tuberculin, has no rational discussion of climate, and does not review the preventive and curative work of dispensaries and public sanatoria?

L. C.

OPERATIVE SURGERY. For Students and Practitioners. By John J. McGrath, M.D., F.A.C.S., Fellow of the American College of Surgeons; Member of the American Medical Association. Sixth Revised Edition. With 369 Illustrations, including full-page Color and Half-tone. Publishers: F. A. Davis Company, Philadelphia. Price, \$8.00 net.

Once a book has marked its sixth edition it is the reviewer who is on trial, not the book. It is for him to find out why the book has succeeded so well. One finds the secret of it in the plain pointed practical advice this work contains. It seems particularly suited to those who are taking their first steps in operative surgery and those who want to know how things are done without actually expecting to do them.

A. E. H.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ARSPHENAMINE-SQUIBB.—A brand of arsphenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 41). Arsphenamine-Squibb is marketed in ampules containing, respectively, 0.1 gm., 0.2 gm., 0.3 gm., 0.4 gm., 0.5 gm., 0.6 gm. arsphenamine. E. R. Squibb & Sons, New York.

NEOARSPHENAMINE-SQUIBB.—A brand of neoarsphenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 45). Neoarsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 gm., 0.3 gm., 0.45 gm., 0.6 gm., 0.75 gm., 0.9 gm. neoarsphenamine.

SODIUM ARSPHENAMINE-SQUIBB.—A brand of sodium arsphenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 148). Sodium arsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 gm., 0.3 gm., 0.45 gm., 0.6 gm., 0.75 gm., 0.9 gm. sodium arsphenamine. E. R. Squibb & Sons, New York. (Jour. A. M. A., April 9, p. 1007).

PROPAGANDA FOR REFORM

DIGIFOLIN NOT ADMITTED TO N. N. R.—Digifolin-Ciba is a product of the Society of Chemical Industry of Basle, Switzerland. It is claimed to be "a preparation of digitalis leaves, that has been freed from their useless and harmful principles such as digitonin (saponin), coloring and inert matter, etc., but does contain all the really valuable and therapeutically active constituents of the leaves, namely: digitoxin and digitalein in their natural proportions. The Council on Pharmacy and Chemistry reports that there is no evidence that digifolin contains all of the glucosides of digitalis as they exist in the leaf and that it is extremely improbable that this is the case, because one cannot remove the saponin without altering the other active principles of digitalis. The Council also held unwarranted the claim that Digifolin does not have the disadvantages of galenical digitalis preparations since it is well established that the un-

toward effects of digitalis are inherent in the principles that exert the desired effects of digitalis and that these may be avoided largely by a carefully regulated dose of any digitalis preparation. The claim that Digifolin-Ciba has all the advantages and none of the disadvantages of digitalis has been refuted so frequently that manufacturers must be aware that it is untenable. Further, the report concludes, the claims now made for Digifolin are essentially those made nearly four years ago, at which time the attention of the American agent was called to their unwarranted character (*Jour. A. M. A.*, April 2, 1921, p. 952).

HEXAMETHYLENAMIN AND SODIUM ACID PHOSPHATE.—Hexamethylenamin acts in acid urine only. Hence, if the urine is not acid, sodium acid phosphate should be given in doses of 1 to 2 gm. midway between the doses of hexamethylenamin. Enough of the sodium acid phosphate should be given to render the urine acid, but not enough to cause diarrhea (*Jour. A. M. A.*, April 9, 1921, p. 1031).

LASH'S BITTERS.—A physician reports that he was called to see a patient who had consumed ninety-one bottles of Lash's Bitters in thirty-six days. Previously the patient had consumed Wine of Pepsin in about the same amount. The amount of Lash's Bitters consumed is equivalent to about twenty ounces of straight whisky daily. The label on the Lash's Bitters bottle declares "Guaranteed free from habit-forming or injurious drugs" (*Jour. A. M. A.*, April 9, 1921, p. 1029).

COD LIVER OIL IN RICKETS.—For many years cod liver oil has been regarded almost as a specific against rickets in children. During recent years it has been made reasonably certain that the administration of cod liver oil alters the calcium balance in such a manner that calcium will be retained in the body and that it increases the capacity of rachitic children to take up and hold calcium. Since the beneficial effects of cod liver oil on rickets may be due to its liberal content of vitamin A, frequently described as the Fat-Soluble food accessory, it is interesting to know that crude unrefined cod liver oil may be 250 times as rich as butter in vitamin A and that samples of refined oil, although not so active as the crude oil, were also far superior to butter in their vitamin potency. The case with which the Fat-Soluble A Vitamine of cod liver oil is destroyed by reagents and drastic manipulations make the various "refinements" of cod liver oil products sold as proprietary preparations even more reprehensible than they have seemed in the past (*Jour. A. M. A.*, April 9, 1921, p. 1009).

SOME OF LOESER'S INTRAVENOUS SOLUTIONS.—The Council on Pharmacy and Chemistry reports that Loeser's Intravenous Solutions of Hexamethylenamin, Loeser's Intravenous Solution of Hexamethylenamin and Sodium Iodid, Loeser's Intravenous Solution of Sodium Salicylate, Loeser's Intravenous Solution of Salicylate and Iodid, Loeser's Intravenous Solution of Sodium Iodid and Loeser's Intravenous Solution of Mercury Bichlorid, manufactured by the New York Intravenous Laboratory, were not accepted for New and Nonofficial Remedies because they are sold under misleading claims regarding their alleged safety and efficiency. The fundamental objection to the claims made for these preparations is the general claim of superiority and safety of the intravenous method. The Council continues to hold that intravenous medication generally is not as safe as oral medication, even with relatively harmless substances and that it does not give "improved clinical results" except under rather narrowly confined circumstances, namely, if the drug undergoes decomposition in the alimentary tract, if it is not absorbed, if it causes serious direct local reactions, or if time

is an urgent element. The Council has recognized intravenous preparations which satisfy these requirements. The Council concluded that these solutions did not meet these conditions (*Jour. A. M. A.*, April 16, 1921, p. 1120).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities, chiefly because the therapeutic claims advanced for them were held false and fraudulent: Methylax Blue Pearls (Pfeiffer Chemical Co.), capsules containing cubebs, methylene blue and probably copaiba and kava kava. Jax Capsules and Antiseptic Injection (The Tropical Co-operative Co.), the capsules containing cubebs, balsam of copaiba and corn starch while the injection was reported to consist of a solution containing phenol, thymol, methol, boric acid and zinc sulphate. Stops It In One Day (O. K. Remedy Co.), consisting of two preparations, a bottle containing a dilute solution of berberin sulphate, and a tube containing a mixture of potassium permanganate and potassium sulphate. Purola Kidney and Liver Remedy, Diarrhea Mixture, Femalin, Sarsaparilla Compound and Compound Extract of Buchu (The Blumauer-Frank Drug Co.), the first, a solution containing vegetable extractives carrying emodin and resin, potassium acetate, sugars and a trace of salicylic acid; the second, a solution of opium, camphor, capsicum extractives, rhubarb, oils of peppermint and anise and a trace of gambir; the third, a solution containing glycyrrhiza extractives, emodin, resin, a trace of alkaloid, sugar, glycerin and aromatics; the fourth, a solution of vegetable extractives carrying emodin, indications of saponin, glycyrrhizin, alkaloids, volatile oils, sugar, glucose and potassium iodid; the fifth, a solution of buchu extractives, sugar, licorice and extractives, potassium acetate and little, if any, emodin. Planter's Golden Crown Special (Planter Medicine Co.), consisting essentially of oil of cassia, methyl salicylate, copaiba, alkaloids of sanguinaria, ethyl nitrite, water and alcohol (*Jour. A. M. A.*, April 23, 1921, p. 1185). Antibrule (Crescent Chemical Co.), essentially a watery solution of picric acid and a small quantity of picroates. Burkhardt's Vegetable Compound (Dr. W. A. Burkhardt), consisting essentially of aloes, capsicum and plant extractives, including resins, probably podophyllum. S. O. S. (Pfeiffer Manufacturing Co.), consisting of two preparations; one, a watery solution containing thymol, zinc, magnesium sulphates and glycerin; the other, pearls containing santal oil, copaiba balsam, oil of cinnamon and fixed oil. Osgood's Special Capsules (H. Planten & Son), consisting of volatile gurjun oil, a phenolic compound and a sulphurated fixed oil. Gin-berry Capsules (Henry S. Wampole Co.), composed essentially of cubebs, balsam of copaiba, santal oil, magnesia and alum. Benetol Vaginal Suppositories (Benetol Co.), consisting essentially of alpha and beta naphthol, boric acid and traces of menthol and phenol in a cacao butter base. Mowery's Gonorrhea Paste (Binkley Medicine Co.), essentially powdered cubebs, copaiba balsam, alum and magnesia (*Jour. A. M. A.*, April 30, 1921, p. 1263).

ALUMINUM POTASSIUM NITRATE.—The product advocated in the July 17, 1920, issue of the *Chicago Medical Bulletin* for the treatment of osteomyelitis is not on the market. The product, which is said to be used, has been analyzed for the Council on Pharmacy and Chemistry in the Association's Chemical Laboratory. Analysis showed that it did not have the composition claimed. For practical purposes the preparation may be regarded as a mixture of 97.5 per cent. potassium nitrate U. S. P. (saltpetre) and 2.5 per cent. of aluminum nitrate (which may be purchased from chemical supply houses) (*Jour. A. M. A.*, April 30, 1921, p. 1265).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., OCTOBER, 1921.

NUMBER 10

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3529 Pine St., ST. LOUIS, MO.

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ORIGINAL ARTICLES

THE APPLICATION OF THE WASSERMANN REPORT*

GEORGE DOCK, M.D.

ST. LOUIS

Though the Wassermann test is comparatively new, it is applied very widely and exerts an influence far beyond its actual value. Based on important biologic facts, the reaction is not only of great scientific interest, but also of distinct clinical value.

On the other hand the test is not specific; it is not an exact test in the sense of many chemical tests for inorganic substances. It does not compare, in diagnostic accuracy, with the demonstration of tubercle bacilli, or typhoid bacilli, or malarial parasites, or meningococci or pneumococci. It is uncertain in the sense that in the hands of the most expert it may give a positive result where there is no syphilis, or a negative result where signs and histological examinations are beyond question.

Clinicians and physicians who have the care of patients have a much greater confidence in the reports than have those who make the tests and submit the reports. This is not at all the fault of the laboratory workers, who are constantly calling attention to the actual state of affairs, and who in practice do their best to give the therapist or diagnostician the most accurate idea possible of the situation. In a recent contribution on the subject the veteran laboratory diagnostician, William Krauss of Memphis (*South. Med. Jour.*, March, 1921, p. 186), says that "the clinical worker should understand just what kind of Wassermann report he gets and what it should mean to him clinically. He must take the trouble to look into the comparative values and

motives for 'modifications.' " Also "the physician should know his share in the responsibility for an accurate report."

What I want to call attention to is the existence of just the opposite attitude on the part of the therapist, from that advocated by Dr. Krauss. The practitioner does not wish to be critical, he wants something infallible, not realizing that the test cannot be infallible and that the "value of the report is greatest only when the limitations are comprehended" (Rohdenburg, et al., *J. A. M. A.*, Jan. 1, 1921, p. 14).

There is at present among laboratory workers great activity and ingenuity in making the test more delicate, not necessarily in the sense of making it more specific, but apparently making it react more frequently to the same causes. This juggling, as Krauss not without reason calls it, reduces the percentage of negatively reacting sera, ignoring Wassermann's margin of safety. Even before the test was made more delicate Charles F. Craig had pointed out the variations that are likely to occur in a single case, without being at all influenced by treatment. As regards the cholesterolized antigen now so often mentioned in reports, Krauss rightly points out that the danger of non-specific positive reactions was admitted from the beginning. Since then "it was found that under prolonged treatment sera may become cholesterol fixed. Hence the cholesterol positive, persisting under heroic treatment, is worthless for prognosis." And yet prognoses are given daily under just these conditions.

As ice-box incubation has also become popular it should be borne in mind that its results are also modified by many factors and add to the number of false positives. Only too often specimens of blood are taken with complete disregard of the precautions essential to accurate work. Chemically clean needles and vessels, avoidance of heat and water, care as to recent meals, use of alcohol, cholesterol as in jaundice or in fever are disregarded. Possible error through a recent

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

disease like malaria, scarlet fever or Vincent's angina is brushed aside as an imaginary fear.

It is curious how little the lessons of daily experience and the warnings of careful clinicians are heeded in applying Wassermann reports. Every one must see from time to time how in a given case two serologists of equal skill and care will give diametrically opposite reports on the same day. That sagacious clinician, Sir Humphrey Rolleston, has recently pointed out with reference to congenital syphilis that a positive reaction at birth does not certainly imply the presence of syphilis and on the other hand "a negative Wassermann reaction may be given by cases in which dystrophies and other lesions are cured by anti-syphilitic treatment."

This over-confidence in a valuable, but not infallible, test is not at all peculiar to syphilis and the Wassermann reaction. It is common to all laboratory tests. It depends partly on the belief in specific signs that began long before the laboratory era, and gives way slowly before the disappointments of practice. But the hope of avoiding the labor of analyzing the history, of making a thorough physical examination, of ascertaining the functional conditions of all the important organs; in short, of knowing the patient we have to treat—this hope keeps up the unbounded faith in the Wassermann report. The same thing is now being done with basal metabolism, the Goetsch test, with single renal functional tests, just as it was done with HCl and with lactic acid in the stomach.

The great difference between over-confidence in any other test and a syphilis test depends upon the peculiarities of syphilitic infection, peculiarities not only pathologic, but sentimental.

If a typhoid blood culture is wrongly reported, the greatest danger is that the patient may die from lack of ordinary precautions. In cancer or tuberculosis the situation is not any different. In syphilis, besides all these factors, there is the deserved horror of the disease. Whether innocent or not there is the shame, the fear of prejudice and disbelief on the part of physician, friends, employers and family.

Then there is the long course of the disease and the feeling of the necessity of specific treatment. If the report is positive the patient looks forward to a lifelong treatment, a treatment at present of a very costly kind.

If the positive report is incorrect, such a patient may suffer as much from treatment as he would have from the untreated disease. If the report is negative, but incorrect, dire consequences may result from the lack of treatment.

Another serious feature of the present attitude toward the Wassermann report is that it too often checks all careful study of the syphilitic patient. Nothing is noted beyond the serum report, because it is supposed to be superior to all other observations that can be made. But we should remember that exact study of syphilis is not twenty years old. Increased knowledge is needed in all parts of the subject—symptoms, pathologic-anatomy, and above all treatment. If we adopt an unskeptical attitude, we miss the individual education that comes only from close clinical study and the progress of knowledge is delayed.

There is not a little reason for suspecting an increase of central nervous lesions under present methods. Only by the most accurate study of large numbers of cases can the true relations be made clear. Much of the observation should be made on patients in private practice, and these observations can only be made if the observers are experienced, thorough and critical.

The physician should remember that the Wassermann report discloses a symptom. That notwithstanding its scientific origin and its high diagnostic value, it is fallible, like many other symptoms. The fallibility varies with the experience and care of those concerned in making the test, as well as with conditions in the patient not yet understood.

In general a patient should be told about the result of a Wassermann test by the physician who orders it. If not, the patient will seek information elsewhere, and sometimes with unfortunate results. Even with the fullest and simplest explanation the patient very often gets a wrong idea of the whole matter. We should remember that in spite of the campaign against venereal disease the ideas concerning it by even the most intelligent part of the public are imperfect and largely incorrect.

In all cases the patient should be told early about contradictory reports, because it is almost certain he will have some experience with them. No matter how candidly the matter is explained he is likely to worry much about the uncertainty that follows all who once suspect themselves syphilitic.

To make the application of the Wassermann report more concrete, let me cite two examples out of a considerable number that show the possibilities.

The first, a false, or at any rate, doubtful positive. A man of sixty who had had a complete examination two years before returned to the examiner for the same laudable purpose—to learn how his constitution was holding out. There were no morbid indications except those of a little arteriosclerosis as

could be expected in a man of sixty who had worked hard and lived well. The conditions under which the subject consulted the examiner made it as certain as it ever is that there was no history of syphilitic infection. The physical examination and laboratory tests were all in except the Wassermann report, which was telegraphed to the patient. It was worded "four plus Wassermann." The patient wired to the laboratory, one of nation-wide reputation, to learn the significance. The answer was: "It means you have syphilis." The man was on his way to Boston, becoming more and more alarmed as he went. Arrived there he went to one of the best known serologists in the country, who in time told him the result was negative. He repeated the tests in New York and Philadelphia, in each place seeing leading serologists, and the report was always negative. Returning to the place where the first examination was made he had tests made in the original laboratory and in another. The new one also gave a negative. The first one reported "four plus with all of nine antigens."

Wherever he stopped over on his way West the patient consulted friends, who referred him to their physicians, and in that way he came to me. After hearing his history, and making a physical examination, I gave a brief statement of the Wassermann status and advised him to stop visiting serologists and physicians and to await the full report of his first consultant and follow the advice it would contain. However, the man insisted on getting another test, so I got Dr. Chesney to take enough blood for repeated tests, if necessary. As Dr. Ives had already been visited by the patient, we compared results, and found we were both negative. Soon after the patient sent me the report of the consultant stating "Wassermann negative" and still later the four plus reporter sent me a long statement showing a four plus positive. One has only to ask what could be gained in such a case by giving arsphenamine to answer the question.

As much harm often follows a contrary course as occurred from paying too much attention to a negative, as in the following:

A prominent surgeon got a cut on a finger while operating for a balanitis. The puncture was followed by a small induration which showed no tendency to healing. Active treatment, begun at once, was stopped as soon as the first Wassermann report came in "negative," and as many other tests were negative it was not renewed. Fever, anemia and distinct mild toxic symptoms kept the patient in bed for seventy-one days, when I saw him, during which time numerous Wassermann tests were made, all negative. On seeing the patient I had no hesitation in making a diag-

nosis of syphilis and immediate specific treatment was followed by rapid healing of the primary infection, soon after by return to health. I was able to find the patient who caused the wound and to see that he had a four plus Wassermann.

This case shows not only the exaggerated trust in the Wassermann, but an erroneous idea of its occurrence in the early stages, as well as the too common neglect of the dark-field examination, which should never be neglected when there are suspicious superficial lesions.

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A WORKING KNOWLEDGE OF MODERN ANATOMY*

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The generalization that our understanding of the practice of medicine in all of its subdivisions has made revolutionary changes during the past twenty-five years, must be conceded by everyone at all open to reason. But the corollary propositions that advances in our fundamental sciences control this progress, and that points noted in clinical observations in their turn react on the basic sciences, are not properly appreciated by practitioners. I trust very few practitioners in this audience depend exclusively on surgical or medical volumes written twenty-five years ago, and yet many men, otherwise progressive, have no texts of more recent date on the basic sciences of anatomy, physiology and pathology. In the few moments at my disposal I aim to illustrate sketchily, and yet concretely, why a working knowledge of modern anatomy is essential to modern practice.

But first let me digress for a few remarks on specialization, which during the past decades has affected anatomy as vitally at it has every other subdivision of medicine. The generalist, who in a reaction of resentment towards some avoidable or even unavoidable shortcoming of specialization, wants to get rid of all specialists, is in the mental status of folk who long for the return of exclusive ox-cart transportation. On the other hand, it would be just as great a tragedy, if under a spell of overemphasis on specialization, all men with a less detailed, but for that very reason broader range of vision, were to lose their influence in the common council. If both the science and practice of anatomy are to make proper progress, the majority of pro-

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

fessional and practitioner anatomists must develop a closer sympathy. Oh, there will always be enough extremists in these groups with different antecedents and aims to keep up the necessary fireworks!

And now to apply these generalizations to the history of anatomy during the past three decades, scientific specialization has added so enormously to our understanding of what most doctors were wont to consider a closed subject, as to amount to a revolution. Which would be all on the profit side of the ledger were it not for the unfortunate fact that many professional anatomists have attempted to teach this enlarged subject with far too detailed scientific accuracy—at least that's the almost universal complaint of students, clinicians and practitioner anatomists. This tendency to lose the common touch and thus talk over practitioners' heads, is simply an anatomic application of an intrinsic shortcoming of specialization. The overswing of the pendulum toward excessive detail has been worldwide, consequently the momentum-gathering reaction to bring the teacher and student of anatomy back into closer sympathy is also worldwide. (See proceedings American Congress on Medical Education, March, 1920, abstracted *Jour. Amer. Med. Assn.*, Vol. 74, No. 12, pp. 824-825; and the proceedings of the Fourth German Congress of Medical Faculties, January, 1920, summarized *Jour. Amer. Med. Assn.*, Vol. 75, No. 14, p. 952; and the review in the *British Jour. of Anatomy*, Vol. 54, July, 1920, p. 332.) Let me here pay this tribute to the reasonableness of the professional anatomists, which is that whereas a few are humanly enough resentful of any outside suggestions, the majority are today meeting criticism from the practitioner's viewpoint in a thoughtful and encouraging spirit. By all means let us continue our fruitful abstract pursuit of anatomic knowledge, but at the same time let us recognize that the embryo-practitioner and practitioner are justly interested in anatomic facts in direct ratio to their practical usefulness.

This brings us to my major thesis, which is that "modern anatomy for practitioners is the gist of gross anatomy, illuminated by all available sidelights." The day of attempting to acquire a real understanding of the structure of the human body by tackling the problem exclusively through gross dissection has long since passed for the professional anatomists themselves in their own technical journals, which discuss microscopic development, function and altered function fully as much as they do pure structure itself. It is by full utilization of every available line of attack that our advances have been won. And so

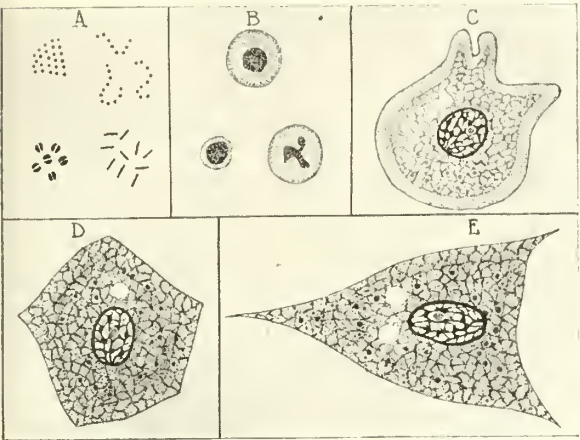
the move grows to break down the old and after all artificial barriers to anatomic breadth of view, and as an advance to teach anatomy in its relation to all other medical subjects—specifically gross anatomy, vitalized by the sidelights of histology, embryology, comparative anatomy, physiology, pathology and the practice of medicine and surgery. Anatomy is probably the most vital subject for practitioners, as it is obviously the foundation on which the whole superstructure of medical education rests. And on the importance of a foundation most of us surely accept as fair and reasonable the Biblical admonition about building a house on the sands.

And now to swing from these introductory generalizations, let me illustrate concretely how each of these sidelights vitalizes the dry facts of gross anatomy. To take them up in sequence, let us start with microscopic structure, technically histology. Before the introduction of histologic study, structures, which looked alike grossly, were naturally enough confused, as for example nerves, tendons and aponeuroses. The discovery of cells—which are all microscopic—by Schleiden in 1837, was obviously an epoch making step forward in our understanding of anatomy. The use of this method of research made the study of embryology intelligible, while all deeper knowledge of structural pathology depends upon it for its very being. Concretely the application of microscopic embryology and pathology to the study of the brain during the past few decades has changed what was practically an unintelligible jumble of white and gray masses and names into a relatively simple proposition. Generally speaking all cells, which perform a different function can be differentiated morphologically (structurally), and in its final analysis this is an inexhaustible subject. However, a working understanding of cells and intercellular substances is too simple to be neglected by any practitioner. Let me throw a basic slide on the screen (see Fig. 1).

Now, this is drawn to scale and shows more detail in the nucleus and particularly in the surrounding cytoplasm than the routine microscopic slide. The very important practical point I want to stress is that white blood cells (leucocytes) are materially smaller than the ordinary blood cells. And so when the pathologist glances at a microscopic slide and announces much or little inflammatory reaction, he's not pulling a clairvoyant stunt—his specimen is simply peppered with these very small nuclei of white blood cells. I'd hate to confess how long it was before I woke up to that.

As embryology and comparative anatomy are so closely related, let us consider them together. The fully developed human organ

is usually a complicated structure, but functionally similar organs in lower animals are very much simpler and therefore more easily understood. Further, the developing human embryo goes through these simple stages, and



A=acteria. B=white blood cells. C=ameba, one celled animal. D=surface covering cell. E=connective tissue cell.

Fig. 1. Various cells drawn to scale (x750). From Pitzman's "Fundamentals of Human Anatomy." C. V. Mosby Co., 1920.

incidentally even goes to the trouble of developing organs which are never used at all, as for example, a yolk sac, segmental kidneys and gills. Let me illustrate this subtopic by a few remarks on developmental stages of the human heart (see Fig. 2).

The simplest possible heart is simply an enlarged extra-heavily muscled area in the course of a large blood vessel. This embryonic heart contracts rhythmically from its entrance at the vena cava to its exit at the aorta. When the blood becomes more viscous, two chambers are developed, one a receiving station and the

other a pumping station. Further, valves are introduced at both entrance and exit of the high pressure chamber (ventricle), obviously to maintain the proper direction of flow, whereas the low pressure receiving station (atrium or auricle) has none. The human heart develops four chambers, but functions as a two-chambered heart until just after birth, when it becomes possible to separate the venous and arterial circulations completely.

The attempt to divorce physiology completely from anatomy was never more than a partial success, for when the old-time anatomists gave, no matter how begrudgingly, the action of a muscle, that obviously is function and not structure. These two subjects dovetail into one another in so insistent a way as to emphasize the universality of all knowledge, even if we did not have the concrete illustration throughout modern anatomic research literature. As a matter of fact it is often very much easier to consider the physiology of an organ first and take up its anatomy secondarily. Let me use a simple placenta diagram as an illustration (see Fig. 3).

Now the function of the placenta is obviously to enable the fetus to live and grow, up to the moment of birth. In order to accomplish that, it is obvious that an interchange must take place between the separate fetal and maternal circulations—that is, carbon dioxide and waste products must pass from the fetal blood to the maternal, and oxygen and nourishment from the maternal to the fetal. The fetal red blood corpuscles remain in the fetal capillary vessels, and these are covered over by another layer of cells, making up the fetal chorionic villi (chorionic=full of capillary vessels; villi=shaggy, that is projection).

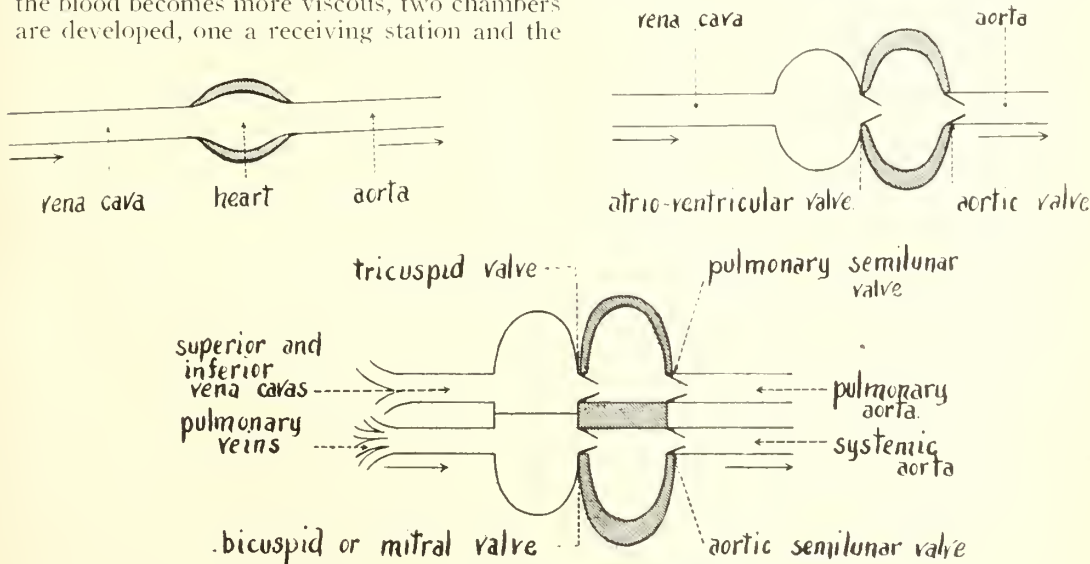
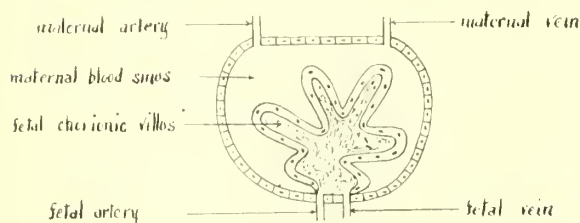


Fig. 2. Diagram of heart. (Acknowledgment as under Fig. 1.)

These fetal chorionic villi are floating in sinuses filled with constantly changing maternal blood. This anatomic arrangement keeps the formed red blood corpuscles from mingling, but allows any soluble substances to in-



chorionic = full of capillary vessels.
villus = shaggy, i. e., a projection

Fig. 3. Diagram of placenta (x100). (Acknowledgment as under Fig. 1.)

terchange by simple osmosis. Which is the gist of the placenta, and further explains why the fetal umbilical vein carries back pure arterial blood to the fetal heart.

As for pathology, it is too obvious to require further comment, that it is useless to

try to explain to anyone how an organ differs from the normal, unless that individual knows what the normal is like. Fact is, the greatest and most vigorous protest against whatever shortcomings there are today in anatomic instruction comes from the pathologists. One shortcoming particularly exasperating to the pathologists, is that the students coming from their anatomic courses very often have absolutely no conception of normal color and consistency, which deficiency could have been easily remedied by utilizing the corresponding fresh glands of other mammals. I suppose most practitioners know there's an anatomic reason for the frequency of secondary deep abscesses in the axilla, but how many realize there's also an anatomic basis for the localization of typhoid ulcers? But now to bring out more concretely this borderland relationship between anatomy and pathology, let's use a gross longitudinal bone section (see Fig. 4).

This shows the medullary (marrow) cavity, the spongy ends, and the compact bone. Now most bone infections start in the spongy ends, and due to the anatomic limitations of the possibility of increased blood supply, there is a great tendency for local gangrene or necrosis of the involved area. Such patients are critically ill, have high fever, and usually a localizing tenderness can be made out over the involved bone. A moment's consideration of the anatomy should convince anyone why such a case demands emergency surgical intervention, for if this abscess is left to follow natural lines of lesser resistance, it is more apt to break into the marrow cavity or perchance even into the joint, than through the compact layer onto the external surface of the bone. In contrast to the great value of the X-ray in chronic osteomyelitis, where time has been allowed for the development of extensive bone changes, both destructive and constructive, the X-ray has obviously no value at this stage of an acute osteomyelitis, where not even the destruction of bone has begun.

And now when we come to consider the relationship between a working knowledge of modern anatomy and the practice of medicine, we come to one of those anomalies which has a historic basis, but certainly no present logical justification. Historically the practice of internal medicine consisted in serving out optimism, pills and names of diseases, none of which called for a profound knowledge of anatomy. The surgeon was called upon to learn anatomy and keep in reasonable touch with its progress, for he was entrusted with the knife, but the ordinary practitioner was exempted. The widespread persistence of this exemption even up to the present date is probably simply another illustration of the longevity of established custom, right or wrong!

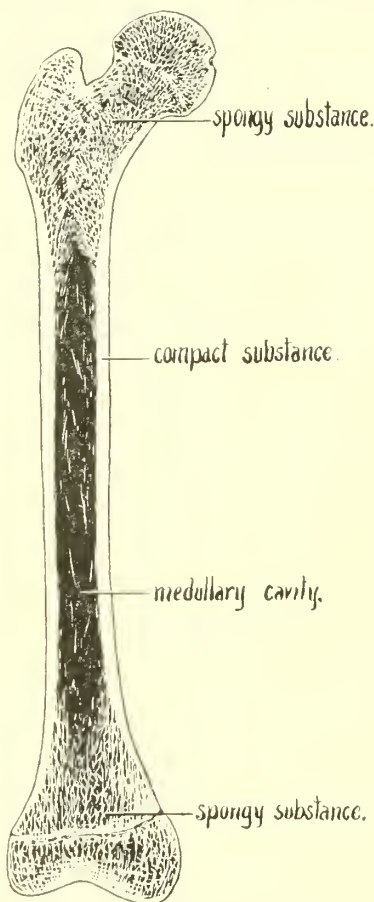


Fig. 4. Diagrammatic section of long bone. (Acknowledgment as under Fig. 1.)

Even though a few functional diseases have no anatomic basis, certainly the overwhelming bulk of diseases the internist is called upon to understand and diagnose have an anatomic localization. Therefore for a proper understanding and treatment, anatomic knowledge is essential.

This strikes me as the richest possible field for research because it has been so neglected—the checking up of modern clinical conceptions against corresponding anatomy. To cite concrete illustrations at random, the position assumed by the patient suffering from cerebrospinal meningitis is probably due simply to the contraction of all voluntary musculature to its uttermost, the preponderating muscle groups determining posture. And I wonder how many times the speeding heart has been whipped up, and perchance even made to flicker out, when the real cause was that pressure on the atria (auricles) was causing the heart to be short of blood for pumping. And obviously a lack of volume in the circulating blood below a certain minimum would produce the same result, which therefore deserves consideration as a possible etiologic factor in every case of small rapid pulse. And I wonder how often the individual with an asthenic, and therefore sagging-down chest, has been made introspective for life or even subjected to serious operations, when the anatomic solution is that the narrowed epigastrium simply didn't have room for the organs normally situated in this region in people of sthenic chest development. Of course I could illustrate this subtopic all day and then be not more than started, but I trust enough has been given to emphasize the importance of anatomy to internists.

Which brings us to the relationship of modern anatomy to the practice of surgery. Now, surgeons are widely assumed to have learned anatomy and to keep reasonably in touch with its advances, and relatively that is true. But in my judgment there is unfortunately a great element of assumption in this popular conception, more particularly in this day of various shortcuts to an operative practice. The old-time surgeon slaved over old-time gross anatomy, for it was a *sine qua non* to his success. He went through a prolonged drilling in the dissecting rooms, and probably overemphasized its relative importance, burdening his mind with all sorts of finer details of negligible practical value. And probably the widespread underestimate of the necessity of anatomic knowledge to the surgeon of today, is a natural enough reaction, and let us hope no more than transitory. But before such an audience, surely these points need no further elaboration.

But as in this discussion at least I've made a brave start at dealing out gratuitous advice, let me carry it through. The truism is often advanced by professional anatomists that every bit of anatomic knowledge has either present or potential practical value, and the conclusion commonly drawn is, "therefore try to teach it all." To which every sympathetic outsider, at all cognizant of relative values, answers: "An honest attempt to achieve the impossible." And seriously this is not a thing to get overly excited about, for it's just human nature for every specialized group to magnify the relative importance of their own particular work. And the correcting leaven comes naturally enough from the relative outsider's point of view. To those who have been carried along with this discussion, my advice to my surgical confreres is obvious: "The practical gist of gross anatomy, and from the broadest possible point of view."

And now as I've progressed so far without active interruption, I'm emboldened to get my last lecture on this subject out of my system. A characteristic specialist's reaction to such a discussion might be summed up, "Oh, I catch the importance of anatomy to the general practitioner of medicine or surgery, but as for myself why I'm so wrapped up in my specialty that I've neither the necessary time nor interest." And that isn't simply the attitude of the small specialist, who rather prides himself on how little he knows about related subjects, but includes many of the big and some of the biggest men in the specialties. To such men I want to recommend as the most effective antidote to the narrowing influence of specialization, a briefed general course in modern applied anatomy. It would pay big dividends in avoiding mistakes by broadening the field of vision, and would even improve their understanding of the anatomy of their special regions. Let me make this statement more concrete by a personal experience and confession. When I was first asked to take charge of the anatomic instruction at the Washington University Dental, and was told to cover the whole body in my yearly course, I honestly thought (or thought I thought) it was surely a wild crazy idea. And yet it took very little practical experience before I began to wake up, and now I insist it's impossible to give anyone a real understanding of any special regional anatomy, without a broad grasp on the whole modern conception of the body's structure. It's only in regard to anatomic foundation that I'm offering a suggestion, for anatomists or near-anatomists can have naught but praise for the pioneer work of specialists in applying and advancing their regional anatomy.

Summary.—And now let me sum up this somewhat rambling discussion. My major proposition is that modern anatomy for practitioners is the gist of gross anatomy, illuminated and vitalized by all available sidelights—specifically histology, embryology, comparative anatomy, physiology, pathology and the practice of medicine and surgery. Through the intensive cultivation of all these methods of attack, our understanding of anatomy has made such progress during the past twenty-five years that today it is as unreasonable to depend exclusively on anatomic texts written twenty-five years ago or in the method of that period as it would be in any other subdivision of medical practice. In other words, every advance in anatomy reacts on all medical subjects, and every advance in allied subjects reacts on our basic understanding of anatomy. A broad foundation is essential for every general type of practitioner, and just as important as a balance wheel for specialists. And now, in conclusion, if you perchance feel that parts of this discussion are gross overstatements, why consider in extenuation that the greater part of my side efforts during the past twelve years has been devoted to the pursuit of anatomy. Howsoever, this concluding statement seems fair: "While on the one hand a working knowledge of modern anatomy will not make either a diagnostician or a surgeon, still on the other a lack of such knowledge is a fatal shortcoming."

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FURTHER OBSERVATIONS ON TOXEMIA OF PREGNANCY*

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At the 1918 meeting of the State Society I had the pleasure of presenting a very general picture of the toxemia of pregnancy and of drawing some very definite conclusions from a remarkable experience which, with my two associates, Dr. Buford G. Hamilton and Dr. George F. Pendleton, we had met in our services at the Christian Church Hospital, at the Kansas City General Hospital and St. Vincent's Hospital.

We concluded that while the type of toxemia would, perhaps, vary in individual manifestations that there was a more or less pandemic wave of this "disease of theories," as it has been so strikingly styled by Zweifel, sweeping over the country. We believe this due to a loss of mental equilibrium; an instability of the nervous system, which yielded

especially in the pregnant woman to this enemy of lowered vitality, infection, which Tweedy, DeLee and Stroganoff hold responsible for toxemia. Bacterial invasion is to be blamed for all toxemia and eclampsia and hence by routine observation and examination early, the symptoms may be detected and the number of eclamptics limited by proper treatment. LaVake has also maintained that all toxemia is of bacterial origin.

In the paper presented in 1918, it was maintained that the enormous increase of toxemia of pregnancy and eclampsia, which was so marked at that time, was one of the results of the mental unrest of all our people, owing to the horrors of the great war, being especially manifest among women, and of peculiar effect on those who were prospective mothers.

An inquiry addressed to leading obstetricians throughout the country revealed the fact that in other centers as well as in Kansas City this condition then prevailed. We are led to the confirmatory belief in this theory by the fact that with an average obstetric population in the hospital quite up to the war limit, the prevalence of toxemia is now of a much less percentage than formerly.

We must admit, however, that there is nothing new in the pathology of toxemia, much as this admission is to be regretted, but we believe we are on the trail of the etiology in the present conclusion as to a bacteriaemia.

Sir W. Smyly of the Rotunda Hospital, Dublin, states that it cannot be doubted that all pre-eclamptic toxemia has the same essential identity, whether convulsions result or not, that being a matter only of degree of manifestation.

LaVake, whose very ingenious arguments as to the infectious nature of toxemia have been mentioned, still follows the teaching of De Lee, Tweedy and Stroganoff, that there is in the body somewhere a focus of infection. The disease is one of bacterial origin. The number of cases encountered will in a large measure be due to conditions which reduce the resistance, during epidemics as of influenza or during the time of war.

The literature since 1918 shows very little change as to methods of treatment. DeLee in an editorial retrospect very vividly expresses the comment that he has lived in his professional life since 1889 through three eras of procedure: first, it was *accouchement force*, manual dilatation and forceps, or version, with a most alarming mortality. Then came Veit's bleeding and morphin, which was gradually abandoned for purging and sweats; chloroform, chloral and morphin; this was followed by slow delivery. Next came Dührssen's vaginal cesarean, proving very successful in the hands of Reuben Peterson, and then a revival

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

of the classical cesarean which had a vogue, and now we are swinging back to the medical treatment of 1889!

We, with DeLee, prefer the individual method leaning toward active emptying of the uterus, but in face of unfavorable conditions of the patient, endorsing the medical regime.

DeLee truthfully says that unusual results in eclampsia are in a great measure due to luck. It is a fact that some eclamptics die, regardless of what is done. This was the dictum also of Dr. Gustav Zinke in a ward walk with the writer in the Kansas City General Hospital in 1905. It was vividly impressed by a series of five sets of results of postmortem specimens of brain and liver, shown by the staff of the New York Lying-In Hospital, at the American Medical Association meeting, at Atlantic City in 1909, where areas of necrosis of greater or less extent showed the focus of destruction in each individual specimen. In 1907, in his discussion of a paper by the writer, warning against the use of chloroform in eclampsia, before the Jackson County Medical Society, Dr. Arthur Dean Bevan, who was also on the programme with a surgical paper, gave the striking results of his then recent experience, showing the identical liver changes in dogs killed by overdose of chloroform and the changes which are found postmortem in women dying from eclampsia.

Of course, cases of this type of fulminating toxemia are necessarily doomed.

The question to be solved in the individual case is the method of early prophylaxis, discovery of signs of infection and prompt treatment. Eradication of foci and constant watching of patients during pregnancy will undoubtedly go far toward reducing the lamentable morbidity and mortality in this disease, which has always been one of the dreaded foes of the prospective mother.

V. Arza says evacuating the uterus removes some of the toxins but does not suppress those in the maternal circulation in the body fluids, and fixed in the tissues; hence, these may first develop after delivery. The patient may die from the result of this condition, not having shown any alarming symptoms in labor.

Zweifel with bleeding and diaphoretics—the expectant plan alone—is able to reduce his mortality to 32. The combination of Stroganoff's morphin and chloral with Zweifel's bleeding, claims a maternal mortality of 5.3, and 21.3 infant mortality.

G. Rossier at the dedication of the new maternity of Lausanne, said that Duhrrsen vaginal cesarean had reduced the Lausenne maternal mortality from 28 in 1917 to 21 in 1919. Now Rossier comes back to bleeding and morphin. He quotes Zweifel, of Leipzig, who says

we are traveling in a circle "like a squirrel in a cage," but Rossier very logically replies, "No, we are like one going up a spiral staircase, step by step, but always nearer the top of therapeutic results."

The general practitioner cannot do a cesarean section in the home. He must therefore concentrate on his medicinal measures, not attempting surgical interference unless it can be done in a rapid and harmless way.

Brodhead concludes from his cases and from a survey of the literature that in a large percentage of cases, cesarean section is not justifiable as he had a maternal mortality of 16.1 and a fetal mortality of 16.5.

As to the heroic morphin plan of treatment, this was first advanced by Zweifel, of Leipzig, and then revived by Stroganoff, the Russian physician, and now has been given an endorsement by a very remarkable series of favorable cases by Ross McPherson of the New York Lying-In Hospital, our own experience is not sufficient to justify our condemning this method, but we hesitate to employ it in the face of the experience with the H. M. C. This was a tablet for several years in vogue among some physicians whose *vide mecum* was the pamphlet literature of the drug manufacturers. The profession was flooded with recommendations of the hyoscin, morphin and cactin combination. Several deaths of infants came under observation in cases where no visible reason existed for the mortality save the morphin. It has always been our *modus operandi* to allow more adventurous souls to do the pioneering in choosing drugs or methods as yet untried, and to select after the demonstration has proven that the remedy is worthy.

It was a matter of regret that the offer of Stroganoff to come to America last year and to demonstrate his theories could not be accepted. A number of us in the Association of Obstetricians and Gynecologists were willing to contribute to the expense but it was found impossible to secure any hospital with a sufficient toxemic population to carry on the method with a time limit which would make the plan feasible. However, to so deeply narcotize a patient as to force the mother's respiration down to six seems a serious risk to the unborn child. One case, nor twenty cases, prove the contention. Let the demonstration run into a thousand and then the profession must accept the idea.

McPherson gives one-half grain morphin on admission of the patient in convulsions. The blood pressure is taken and if over 175 she is bled sufficiently by the phlebotomy aiming to bring the pressure down to 150. The stomach is washed and 2 oz. castor oil poured down the tube when the lavage is finished. The next procedure is a two-gallon colonic irrigation

of glucose 5 per cent. McPherson holds that by repeating the morphin in one-fourth grain doses hourly the respiration may be kept at 8 per minute, convulsions cease and labor sets in to be terminated voluntarily or by low forceps. Of 67 cases, seven mothers died; the fetal mortality was 28.5 per cent. Nearly all the fetal deaths were of infants premature or macerated. It is now claimed that in the great majority of cases the macerated fetus is syphilitic. McPherson observes that in no case which was a term and a fetal heart heard did the enormous dosage of morphin seem to disturb the vitality of the child. This is a strong endorsement.

As to our own plan of treatment, we have continued the same general technique which has proven so successful in the past five years. First the case is not taken for granted but demonstrated by a blood pressure of 165 and at least one other classical sign, aside from albumin to be an infectious toxemia. If under observation from the beginning, as are the majority of our patients, the general examination includes all possible local foci of infection; teeth, tonsils, kidneys are gone over and the history sometimes develops the evolution of a suggestion which may put one on the alert.

When an emergency case, we immediately institute such measures as will tend to rapid elimination. The blood pressure is at once taken and recorded. If over 170 veratrum m. x. is injected hypodermatically; lavage with soda bicarb. is done, and following this, two ounces of mag. sulph. is given. If the blood pressure continues to be stubborn, bleeding is considered after the second dose of veratrum in a half hour has shown no effect. The question of sweating and waiting; or of immediate cesarean section depends entirely on the condition and history of the patient.

Given a primipara with a long hard cervix and with blood pressure not relieved after the first preliminary treatment, and especially if one convulsion has been suffered, consultation should determine if watchful waiting or immediately doing a section is to be considered the safer procedure.

If a soft cervix the patient is given pantopon gr. 1/3, scopolamin gr. 1/100 and the cervix dilated with Hegar's dilators up to 20 and a No. 4 Voorhees bag placed. The patient is kept under scopolamin, gr. 1/100 every half hour or hour as needed until dilatation will allow of the engagement sufficient to permit a low forceps, if L. O. A. If a posterior position the choice is between a Scanzoni, which is the writer's preference of method of rotation or rotation of the shoulder or version. A small anesthesia of ether at the perineal stage is usually given.

Including the 51 cases already reported since

May, 1917, we now have 262 cases of toxemia of which 68 suffered at least one convulsion.

The maternal mortality is six or 2.2 per cent. This is partly luck of course. If we include only the number which had convulsions the percentage is 8.8. Two of these had pre-existing nephritis. The infant mortality is eighteen or 6.8 per cent. If, however, we exclude the premature infants, and we believe that the fetal mortality should not include cases where eclampsia comes at the sixth or seventh month, as in this instance we are striving for the life of the mother whose interests are of course paramount, the fetal mortality is eleven or 4.2 per cent.

In those cases which are near term and where the infant has a fair chance in the struggle, we commend these results which to us are most gratifying. Indeed, at the present time no technique has appeared which would appeal as being more promising as regards either mother or child.

Bryant Building.

MODERN METHODS OF CONDUCTING LABOR*

A. L. GRAY, M.D.

ST. JOSEPH

During the past thirty years there almost has been a revolution in regard to the handling of confinement cases. Old methods have become obsolete. We no longer trust to nature, but in a way we surround our patients with protection and care which insures safety.

Thirty years ago, so-called child-bed fever was to be expected in a number of cases. It was never dreamed of by the physician at that time that he could have anything to do with the condition. No one dreamed of wound infection or blood poisoning. It was regarded as a specific disease and was to be expected in a certain proportion of cases.

Along in the eighties, when that great obstetrician Dr. Lusk wrote his book, he gave his version of child-bed fever on 100 pages, and in light of modern knowledge, said nothing. It was during his time that the discovery was made that patients examined by the medical students of Bellevue Medical College, fresh from the dissecting room were more susceptible to infection than on examination by students who had dissected the year before. They then figured out that when students who did not examine at all, were having no infectious cases.

Think of it, in light of our present knowledge, what it would mean to go from a dissect-

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

ing room and with bare hands examine a patient. We would expect them all to be infected.

Happily that is over and you can scarcely go into a cottage amongst the most ignorant but who have heard of sterilization and antiseptics. In 90 per cent. of places they have some remote idea of the above terms. They associate it with cleanliness.

We have clean gowns, beds, bath, etc. I well remember when I began to wear a gown. The old ladies said I was "nasty nice." Then I began the use of gloves, and they said I was afraid my fingers would be soiled. Even neighboring doctors voiced those slurring remarks. Happily that is changing day by day. What are the consequences? The mortality from fatal infections in one quarter of a century has been reduced from 6 per cent. to one-half of 1 per cent.

Have a system of cleanliness. If in the hospital your patient will be prepared for you. If in a residence the responsibility is yours and mine. Empty the lower bowels, clip or shave. Thoroughly scrub with soap and water the lower abdomen, vulva, anus, and inner thigh, after which wash with one-half to one per cent. lysol solution, and make few examinations. If uncomplicated two is sufficient. Make and cultivate rectal examination. Usually this will suffice.

Where the men who do obstetrics are imbued with the idea of asperis and antiseptic to the extent that they have learned in surgery, our number of septic cases will be reduced to nil. They go to the hospitals and observe the technique in surgery. They do not have that opportunity in obstetrics, and because they have a case of sepsis only occasionally they become derelict in their duties, and as a consequence sepsis follows.

If we will use absolute cleanliness, make few examinations, and pursue the follow-up care of our patients, morbidity and mortality will be greatly reduced.

Ways and means have been evolved and are being developed for the purpose of making labor more endurable, and it is of these I wish to speak in particular.

Some fifteen years ago morphin, hyoscin and cactin were recommended, and in a large number of cases it was very efficient in making the patient fairly comfortable during the first stage of labor. Some objections were discovered and these objections were (1) delirium, (2) intense thirst, (3) post-partum hemorrhage, the latter being due to too much relaxation of uterine muscles, and if the dose was repeated we had too many asphyxiated babies and a corresponding mortality.

The above ill-effects refer to its first use

when the dose of morphin was one-fourth gr., and the hyoscin correspondingly high.

After a few years they put on the market the H. M. C. No. 2, a vastly better and safer combination, and as yet I have found no improvement in the management of the dilating stage than this H. M. C. No. 2. Repeat in four hours if necessary.

I never attend a birth without having in my grip H. M. C. No. 2, and chloral hydrate for the management of the first stage. The effect can be prolonged by one or two 10-grain doses of chloral hydrate, and pass to second stage with comparatively little pain, and I think it is the duty of every man who does obstetrics to relieve as much as possible during the first stage. In this way you will relieve the patient so that exhaustion does not take place, and will have a correspondingly less number of forcep deliveries, as exhaustion itself is the prime indication for this instrument.

The next remedy for the alleviation of suffering of the parturient woman is the so-called "twilight sleep," which as you will remember originated in Freiburg, Germany. The manner in which this was presented to the laity, physicians and obstetricians of the world smacked quackery, and there is a corresponding reaction against it.

In the first place a world-wide propaganda was started. A woman, not a physician, was presumably sent to investigate and presumably by McClure Publishing Company. She reported in the most glowing terms. It caught the laity and physicians like wild fire. Women were sent all over the country, talking to expectant mothers of its wonders. Some objections exist when it is simmered down to this fact, first, it only has perfect results in 70 per cent., 15 per cent. partial results, and 15 per cent. produces delirium and makes it regrettable.

On account of the last 15 per cent. no friends or member of the family was allowed to see the patient at Freiburg. I believe under favorable conditions the treatment is wonderfully good. I used it a number of times in the summer of 1914. My results were perfect, with the exception of one case, and this one was wildly delirious for three hours.

First, this course should be pursued only in a hospital. A well trained nurse should be in constant attendance. These patients may become delirious at any moment, and have a suicidal tendency, jump from the window or do themselves bodily injury.

There are just two dangers as a result, and practically only two: (1) post-partum hemorrhage, and since we have pituitrin this can be largely averted; (2) danger of asphyxiation of the babe. This is a danger ever pres-

ent. The manner of giving is 1/7 gr. narcofin, a product of opium, and 1/200 gr. scopolamin. At the end of 50 minutes give 1/400 gr. scopolamin. If patient begins to rouse up at four hours give 1/12 gr. narcofin and 1/400 gr. scopolamin and this is usually sufficient.

Few obstetricians are now using the full course. A little good can come out of most everything, and I think some at least has come out of this. Many are now using this treatment in the modified form and it has very similar effects to the H. M. C., is attended with no ill effects and is a combination which I believe wholly adopted to the first stage of labor.

Give one dose which will not cause asphyxiation of the babe, and if the cervix is not completely opened by the time its effect is lost, give one, two or three 10-gr. doses of chloral hydrate, and keep patient in doze until dilatation is complete or about so, and then administer nitrous oxygen and oxygen in the end of second stage. And then give pituitrin at the expulsion of child. Pituitrin overcomes the danger of hemorrhage, one of the dangers of opium relaxation, and oxygen overcomes asphyxiation of babe.

To me this is the ideal method of conducting a labor, safest for mother, safest for babe and with a minimum amount of pain.

About the year 1910 another remedy was presented to the obstetricians, namely, pituitary extract, and no remedy or drug perhaps in the whole list of the pharmacopeia is more universal in its effects than this drug. No remedy has been more abused, and yet it is capable of wonderfully good results if properly used.

Schulze says in a healthy multipara with the os fully dilated and the membranes ruptured, with a head presenting normally and resting on a relaxed and easily stretched perineum, and the pains showing a tendency to lag, we have conditions as nearly ideas for the administration as we can hope to find.

Now you must remember that there is a difference between a patient saying she is worn out or tired and uterine exhaustion. A woman may say that she is so worn out and that she cannot have another pain. A woman may complain of complete exhaustion, but if her pulse is between 70 and 80, full and regular, that woman is not exhausted, but tired. If the uterus makes no pressure downward, and the presenting part does not make pressure against the cervix or perineum, then she is having uterine exhaustion.

There is one condition in which you can use pituitrin before the cervix is fully dilated, and that is when the water sack is unruptured, and cervix is soft and dilatable. The great danger when water sack is ruptured is that the continuous pains will cause asphyxiation

of babe, as the frequency of pains will be reduced from, say five minutes to one or one-half minute, but the secret of success in its use at this time is the size dose.

Do not allow yourself to give more than three to five drops with an undilated cervix, and DeLee gave good advice when he said that he never gave pituitary extract before dilatation of cervix, unless he had a can of ether in the other hand. Happily this violence of pain can be reduced by inhalation of ether.

During its third year's use, there were reported 24 ruptured uteri, and no doubt there were many more unrecognized and unreported. In too large doses it is capable of rupturing the uterus. This is especially true in malposition, say occipito-posterior, face, brow, transverse and breech presentation. Then, too, a continuous pounding of the head on one spot in vagina will cause traumatism and necrosis. If cervix is not dilated it will cause laceration of cervix. Indeed many have been lacerated into the peritoneum cavity.

This drug I believe to be very efficient in placenta praevia. After packing vagina thoroughly, our patient will frequently bleed into uterus sufficient to destroy their lives. Give two or three drops every hour and you will have sufficient contraction to prevent this.

Again I wish to call your attention to its abuse in cases in which you have high blood pressure. In uremic cases in which they have a blood pressure of say 145 or 150 we know that they are on a precipice ready to be hurled over at any moment, and pituitrin in one c.cm. dose raises the blood pressure six to eight, and may be sufficient to cause a convulsion, therefore, in cases of high blood pressure, if you use it at all, give in small doses, often repeated rather than one large dose.

To sum up I do not believe we are ever justified in giving a large dose, say 1 c.cm. previous to birth of child. Give small doses oft repeated if necessary.

It is a remedy superior to all others known in checking and preventing post-partum hemorrhage; superior to ergot because of its rapid effect. You cannot hope to get effects from ergot in less than 10 to 20 minutes. Pituitrin is much more rapid. If given into vein it will have effect in less than 20 seconds. If given direct into a muscle, say deltoid or biceps, it will have effect in one-half to one minute. If given subcutaneously it has results in three and one-half to four minutes.

The next means to which I have just casually referred is nitrous oxide and oxygen and it is a God-send to expectant mothers. It is safe and effectual. I have used it 600 times from five minutes to five and one-half hours, with no ill effects.

This was adopted for obstetrics about the

year 1910 by E. I. McKerson. When carried to the analgesic stage, in my opinion, it is safer for both mother and babe than any other anesthetic.

When chloroform or ether reaches the tissue its marked affinity for fats and fat-like substances of the cell bind it there, making its effect long continued after the inhalations have been stopped. These vapors are taken up and if continued over a long period they inhabit uterine contractions and delay or even bring labor to a standstill for a time.

Since nitrous oxid is insoluble in fats, but exceedingly soluble in blood serum it has no accumulative action for tissues by which it may be retained. Its elimination is quite complete in two minutes. Its absorption is even quicker. The patient will usually be unconscious in six inhalations, and three or four is sufficient for the analgesic stage. I do not mean to convey the idea that it is entirely devoid of danger, but if your apparatus is properly regulated the danger is exceedingly small. In the first place it will shorten labor at least 25 per cent. Secondly, patients are stronger following delivery. Thirdly, better control of patient reduces laceration. It does not favor hemorrhage as other anesthetics do. By giving pure oxygen after birth you reduce the amount of blood lost.

It is the safest anesthetic in eclampsia and if pure oxygen is given while the cord is pulsating nothing will relieve the cyanosis of the child so rapidly.

There are two objections which I consider of small importance. The apparatus and tanks are bulky and heavy. The gas is expensive. It requires no expert to give it because it is only given to the analgesic stage, and yet there is a knack in giving it in order to get good results.

It is to be given during pain only and the first thing to do and I consider it essential to produce a good psychological effect upon patient by explaining that it is harmless, and that it does not produce the smothering effect produced by ether.

Let them take a few whiffs between pains of moderate strength in order that they may be convinced that there is no odor and no ill-feeling effect. When the patient has a pain give but little, and increase the amount each succeeding pain. Increase it until you have a slight dizziness, and afterward maintain it at about this strength until the last pain or two when I would cause them to be unconscious.

I believe this is necessary for two reasons, one is to relieve the extreme pain, and second that you may destroy resistance in allowing the head to pass over the perineum. When they feel the approach of a pain, have them

take two or three deep inhalations, and then tell them to forget the gas.

I use nitrous oxid and oxygen full strength without the use of the oxygen unless the patient has a tendency to become cyanosed. In this case I allow the patient to have about 5 per cent. oxygen.

Not one in twenty require any mixture. After the babe is born I shut off the nitrous oxid and give them straight oxygen. In less than one minute it has changed a bluish partially asphyxiated babe to a pink colored skin. It invigorates the mother and prevents post-partum hemorrhage by this invigoration.

I believe that in women who are on the verge of an eclamptic attack, quietude produced by the use of gas anesthesia will frequently avert an attack.

The next method to which I wish to refer is prophylactic forceps operation as a means of relieving or alleviating the suffering of childbirth. This procedure is brought out by Joseph DeLee. The public is demanding with a voice that is becoming louder and louder each year a relief from the pain and danger of childbirth.

The craze of the twilight sleep is sufficient evidence that "tokophobia" is spreading among women. As before stated morbidity and mortality has been greatly reduced as far as mothers are concerned, but unfortunately remains about the same, 5 to 6 per cent., as regards the babe.

Prophylactic forcep operation is the routine of delivering all head presentations by means of forceps as soon as the presenting parts rest on the pelvic floor. The immediate delivery of placenta and repair of cervix, vagina and perineum, while the patient is still under ether.

Now to give the management of these cases from first to last. First, Dr. DeLee gives the modified twilight sleep, 1/6 gr. morphin sulph. and 1/200 scopolamin, in one hour 1/400 gr. scopolamin, and repeats in four or five hours if cervix is not fully dilated. If not dilated at that time gives 15 grains chloral hydrate and sodium bromid 40 gr. per rectum, and says this procedure carries them to complete dilatation of cervix. He then gives ether sulph. and delivers with forceps. As soon as the head is born 1 c.c. of pituitrin is given. He waits not longer than five minutes for delivery of placenta. Introduces his hand palm up into the posteria neck of cervix, and with some pressure on fundus uteri delivers the placenta, using his hand as you would use a shoehorn in putting on a shoe. Repair is followed at once. A dose of morphin sulph. and the patient sleeps for several hours, and the memory of the birth is practically effaced.

Now the question is, Is it a justifiable procedure? For the obstetrician with large ex-

perience, perhaps yes. However, not in my opinion for the great masses who deliver babies. It gives the man who wishes to get away from his case too much of an excuse.

This procedure could not be carried on safely outside of a hospital. This gives the man who does surgery and some obstetrics a chance to make a forceps case out of every case. It gives the man who wants an additional fee an excuse.

In my opinion the mortality and morbidity of mother will be increased. In my opinion it is dangerous teaching.

Now the question resolves into this: Is labor a normal function? In my opinion it may be normal or pathological even in normal presentation. If a woman falls upon a fence and punctures her perineum, we call this pathological, and are we justified when an abnormally large baby is driven through a small birth canal, and the perineum is ruptured in saying it is normal? No, when damage is done it becomes pathological.

If a babe slips through its cradle and its head is caught and causes cerebral hemorrhage we say this is pathological, but if a babe's head is sufficiently compressed in birth canal to cause cerebral hemorrhage, can we dare say that this is normal? I am of the opinion that if the passage and passages correspond in size, then we have a normal physiological condition. If there is a lack of proportion in size, position, presentation or shape, then we have a pathological condition.

It is the duty of the obstetrician, by careful measurements of pelvis both externally and internally and measurement of child preceding birth, to determine whether or not it is normal or abnormal, and I do not believe anyone is justified in interference when you have satisfactorily determined that everything is normal.

On the other hand, I believe an obstetrician is derelict in duty if he trusts to nature until damage is too extensive, either to passage or passenger.

211 Physicians and Surgeons Building.

CARCINOMA OF THE BLADDER IN THE RELATIVELY YOUNG ADULT*

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ST. LOUIS

When bladder carcinoma is mentioned we usually think of the individual who so unfortunately is afflicted with this most dreaded malady as some aged, weak and emaciated person. A review of the literature for the past

twenty years, accessible to the St. Louis Medical Society Library, further substantiates this assumption, in that the ages of the patients are not given, or are in most instances above 50 years. Clute says he has only seen two cases between 30 and 40 years. In a previous paper I presume one of these cases had been reported; the age was 39 years. Judd in a report of 114 cases of bladder tumor in which he classifies only fibromata and myomata as benign and papillomata and carcinomata as malignant; there were only eight cases below the age of 35, four males and four females. Of these two were below the age of 20, both females. One 7½ whose symptoms had begun seven years previously, and who died soon after operation; the other age 17, duration of symptoms five years, who died eleven months after operation. No note is made of the particular pathology of these eight cases of bladder tumors, therefore we do not know if they were true carcinomata or not.

Many writers apparently assume their readers will take for granted that their patients are well along in years, and discuss the particular phase of their subject without mentioning age.

The aim in this presentation is, in a way, to discuss bladder carcinoma in general, but particularly to show that we can suspect its presence in any case where there are bladder symptoms, almost regardless of age.

At present we do not know any more of the etiology of carcinoma of the bladder than we do of carcinoma of any other part of the body. Statistics show that it is more common in males than in females. Since it is more common in the later years of life we should suspect it comparatively earlier in the female. Both cases herein reported saw considerable overseas service in the late war; one had been gassed.

Symptoms do not differ materially from those of many other bladder conditions, such as hemorrhage, tenesmus, urinary frequency, pyuria, etc. Possibly there is one pathognomonic sign, that of passing a definite piece of tissue, not to be confused with mucus, pus, or epithelial shreds. Such a sign, of course, is only indicative of bladder or urethral tumor and microscopic examination is necessary to classify it.

The surest and simplest means of diagnosis, where bladder symptoms exist, is a complete examination of the entire genito-urinary system; which means cystoscopy, when a piece of the tumor, if one is found, may be removed for pathological examination. These sections, however, if negative for malignancy cannot always be relied upon owing to the peculiar arrangement carcinomatous tissue assumes in many cases of the so-called benign papillo-

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

mata. Occasionally the nature of the tumor is so evident that we may depend upon our experience and judgment in observing it through the cystoscope for a diagnosis, and removal of a section is only necessary for complete record. In manifest cases it is probably wise to sacrifice record rather than remove a specimen, as the manipulations are not without danger, however slight they may be.

Buerger's interesting report of 113 cases of bladder tumor adds much to our knowledge of the pathology of papilloma and carcinoma. He shows from his work that carcinomatous changes may take place in any part of a papilloma and not always in the inaccessible depths of the tumor as some of us have been allowed to believe. Means by which sections may be removed for examination are suggested and emphasis is laid upon the fact that large sections are not always necessary, as often correct diagnoses are made from bladder washings after fulguration, or from the small particles adhering to the fulgurating point. This, Buerger and his co-workers have found possible by the recognition of certain abnormalities in the conformation of the cell, such as cells manifesting irregularities in size and shape; nuclei rich in chromatin, deeply staining and of bizarre shape; cells with atypical mitosis; giant cells and multinucleated cells. All these when occurring in a papilloma he feels means carcinoma or beginning carcinomatous changes.

Before the advent of our present methods of treatment the life of a carcinomatous patient after the diagnosis had been made was usually estimated in months, provided, of course, the tumor was not in accessible reach of surgery and the patient was not a good surgical risk. In Judd's series of 114 cases, a great number of whom were treated surgically, the average length of life for all cases from beginning of symptoms until death or the time when last heard from, was 39.1 months, while for the eight cases below the age of 35 the average was 42 months.

Treatment of bladder carcinoma has been considerably revolutionized within the past few years, with the introduction of radium, the high frequency fulguration, and the successful application of the X-ray. Surgery with removal of the tumor and the involved portion of the bladder continues prominently above all other methods, but should be considered applicable from the standpoint of the patient's general condition and the location of the tumor.

There are some who consider open surgery the method of choice in the treatment of all cases, but to me it seems entirely reasonable to resort to the more palliative methods when the tumor involves the neck, the trigone or

any particular portion of the bladder where it would be necessary to perform a total cystectomy, or transplant one or both ureters. Operations carrying with them such radical surgery are indeed a good index to a surgeon's ability, but unfortunately we are forced to face our after-results, and statistics of late years show that length of life is very little more and the mortality about as great following one or the other methods.

Ureters which have been manipulated to any great extent, such as transplanting are very prone to become infected with resultant pyelitis and pyelonephritis, which logically can be best treated by lavage through a ureteral catheter. This simple method is often denied us even though the ureter has been transplanted into another part of the bladder. Such a complication which occurred in case No. 2 could easily have been disastrous had radical surgery been resorted to. The combined treatment of radium, X-ray, and high frequency fulguration have all been very beneficial. The fact that circumstances often necessitate the use of one or two of the methods more than the combined three and admirably good results are obtained, it would seem that each method has unquestionable merits.

We have been in the habit of using radium in a minimum dose of 50 milligrams applied from 5 to 8 hours at a time. There is no set rule for the number of applications; this is governed by the progress of the case. Our method has been to apply the element which is contained in a silver capsule welded on the end of a flexible silver staff which is covered with a rubber capsule. This was devised by Dr. John Kimbrough and from the standpoint of mechanics has been very effectual. After locating the tumor by means of a cystoscope the radium is applied through the urethra to the part to be treated. It has occurred to us to utilize a fluoroscope in these applications, but up to the present time satisfactory procedures have not been agreed upon.

X-ray according to the method of Pfahler, though questioned by some of having any beneficial effect upon carcinoma of mucous membranes, undoubtedly produces some kind of change in the tumor, as evidenced by certain reactions generally and in the tumor itself; the latter manifested by an increase in the amount of pus cells, mucus and blood in the urine more than existed previous to the exposure and which gradually improves afterward. We feel that clinically this reaction is a beneficial one.

Beer modestly disclaims any benefits from fulguration in the treatment of bladder cancer, though a number of good men throughout the country claim excellent results in certain types of cases. I have been in the habit of

using it in all cases where there is tumefaction, with good clinical results, as will be shown in case No. 2. I have also found it very valuable in controlling hemorrhage of the ulcerated types. Either the bipolar (D'Arsonval) or monopolar (Audin) current may be used, but in my hands the bipolar has been easier of control and much more effectual.

About a year ago Dr. Bransford Lewis and I reported five cases of bladder cancer, in which we felt that we had excellent results from the palliative non-operative treatment. These were a few cases in which we believed our results were well worthy of report. They did not represent all that we had treated in this manner and had not improved so nicely, either because the disease was too far advanced or that the patients failed to complete their treatments. Since our report one of the cases has had a definite recurrence while another has developed a vesico-vaginal fistula, but at present is feeling good and apparently in good health since having had a pyonephrotic kidney removed, which doubtless was the result of her bladder tumor involving the lower end of the ureter.

Case 1. Dr. X, white, male, aged 32, single, physician. Present trouble was first noticed in August, 1919, when after strenuous gymnastic exercise he passed bloody urine and a small piece of tissue which was lost in the toilet. The bleeding continued and when he consulted me the following day his urine was intimately mixed with bright red blood. The specimen contained only red blood cells and epithelial cells; no pus, bacteria or casts. A cystoscopic examination was suggested, but the patient expressed a preference to postpone it a few days to see if the bleeding would not cease. Two or three days later the urine was absolutely clear and remained so until March 3rd, 1920, when suddenly he noticed a re-appearance of the hematuria even more profuse than the first time. During the following night his bladder became filled with blood clots resulting in almost complete retention of urine.

Family History.—No malignancy.

Past History.—Had most of the childhood diseases otherwise always healthy until the beginning of the present trouble. He saw considerable foreign service in the World War. Venereal history of no significance.

Habits.—Smokes cigarettes to excess, no drugs or alcoholics.

Examination (General).—Well developed and nourished, slightly anemic, and says he is a few pounds under weight, otherwise uninteresting.

Urological.—Urine very bloody, containing clots. External genitalia normal. There were no urethral strictures. The urethra was very sensitive, requiring an unusual amount of anesthetic. Kidneys not palpable and there was no tenderness over either kidney or course of either ureter. The bladder was markedly distended. After introducing a cystoscope it required some time to rid the bladder of blood clots and clarify the medium sufficiently for satisfactory inspection. Upon observing the interior of the bladder a multiple villous like tumor $2\frac{1}{2}$ cm. in diameter was located attached by a fairly broad base to the right posterior surface over that part of the right ureter traversing the bladder wall and about $1\frac{1}{2}$ cm. from the ureteral opening. Considerable blood

was escaping from a part of the tumor, which was instantly controlled with fulguration. No specimen was removed, but later in the day a piece of tissue was passed as a result of the fulguration; this upon section and examination was pronounced "carcinoma of the papillary type" by Dr. R. L. Thompson.

Treatment and Progress.—Five applications of radium, 5 series of X-ray and 6 or 8 high frequency fulgurations have been given. The tumor disappeared after two or three fulgurations. A small ulcer has remained at the point of attachment up to the present time. This is surrounded by a small amount of edema and at times is covered with a pyogenic membrane.

About a month ago after a trip to Florida where he engaged in considerable exercise the ulcer became irritated. A few drops of blood were passed at one time and a phosphatic concretion, usually referred to as cancer cap, was passed at another. This has materially improved after one fulguration and one application of radium. The urine has remained remarkably clear throughout the course of the disease. Generally the patient has been in good health, having regained weight lost, and suffers no inconvenience.

CASE 2. G. S., white, male, aged 24 years, occupation, vice president Transfer Corporation. Referred by Dr. J. C. Lyter, November 20th, 1921.

Present Trouble.—About three months ago developed frequent and painful urination accompanied by loss of weight, malaise and loss of appetite. No chills or fever, no blood in urine, no foreign bodies passed. He consulted his family physician, who administered medicine by mouth and gave bladder irrigations. Trouble gradually grew worse when he was referred to a urologist who cystoscoped and diagnosed it "severe cystitis and possible median bar obstruction." Trouble then became rapidly aggravated and a few days later he consulted Dr. Lyter. At that time he was suffering from complete retention of urine accompanied with much pain and urgency.

Past History.—Always very healthy and doesn't remember ever having been ill until four years ago, when he developed frequent and painful urination necessitating voiding every few minutes day and night. After about one or two weeks blood appeared intimately mixed with the urine. He then consulted a physician who placed him in a hospital and inserted a retention urethral catheter and instituted bladder irrigations. There were no chills or fever, no foreign bodies passed. At the end of ten days or two weeks he left the hospital apparently entirely relieved, but after a few days developed a prostatic abscess, which necessitated his return to the hospital where he remained about three months. After this he was apparently free from bladder symptoms; was later accepted in the army, where he saw considerable foreign service, was severely gassed and had an attack of influenza. Since then he has been in fair health until the beginning of the present trouble. Venereal diseases are denied.

Habits.—Smokes cigarettes moderately. No drugs or alcoholics.

Family History.—No history of malignancy or tuberculosis, otherwise insignificant.

Examination (General).—Well developed and nourished, expression that of great pain, temperature 99 to 101 degrees F. Other than this the general examination was uninteresting.

Urological.—The external genitalia were normal and well formed. No urethral discharge, kidneys not palpable, no tenderness over vertebral angles or course of ureters. Swelling and great tenderness in the suprapubic region. There was complete urinary retention and repeated efforts to pass urine

only a few drops of blood were passed. A soft rubber catheter No. 20 French passed readily and about 20 ozs. of urine was withdrawn containing some blood, much pus and many micro-organisms, mainly of the colon and staphylococcus groups. A retention catheter was inserted and patient sent to hospital to rest and recover from his infection and inflammation sufficiently to cystoscope without taking chances of producing further damage. The Wassermann was negative.

November 23, cystoscopy revealed a large tumor mass, smooth in outline, occupying the right side of the bladder, attached to the right posterior wall immediately over and obscuring the right ureter opening. The tumor filled fully one-third to one-half of the abnormally distended bladder as seen through a cystoscope and as shown by a cystogram. A section was removed for examination and pronounced "papilloma, suspicious carcinoma," by Dr. D. L. Harris. Later a small section examined from a specimen passed following fulguration was pronounced "carcinoma" by Dr. Harris.

Treatment and Progress.—December 4th, 1920, one radium application, 200 milligram hours. December 8th to 20th, one series of X-ray treatment.

From November 25th to May 12th, twelve high frequency fulgurations d'Arsoval current were given at regular intervals. Was able to void without catheter January 9th.

March 31st, 1921. Only a small portion of tumor remaining; small ulcer has appeared about one-half inch inward to site of tumor attachment. May 12th, 1921, only a small ulcer remains, the other ulcer appears to have improved. The patient has gained about 40 pounds in weight and feels as good as he ever did. The urine remains slightly cloudy and contains small amounts of pus and colon bacilli.

Complications.—December 3, 1920, developed an epididymitis, right side, which delayed treatment for some time. January 17th, developed chills and fever, which were found due to a pyelitis, right side. Urinary antiseptics by mouth in large doses showed no improvement. One ureteral catheterization with lavage of pelvis was followed by immediate relief.

Comment.—(1) All non-venereal conditions of the urinary system warrant a thorough and complete examination of the entire system with a cystoscope.

(2) Specimens should be obtained from questionable tumors and thoroughly examined for possible malignancy, irrespective of the patient's age.

(3) All methods of treatment at our disposal are applicable in our endeavor to effect a cure of carcinoma, or at least hold the disease in check.

(4) It appears logical that bladder carcinoma when recognized in the early years of life should be more amenable to treatment than in later years.

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DISCUSSION

DR. CLINTON K. SMITH, KANSAS CITY: I think Dr. Moore has introduced a most important subject. Undoubtedly there are a lot of cases of bladder tumors overlooked in the early stages, when treatment could be more efficient than when seen later. It is generally conceded that the majority of bladder growths are potentially malignant. If allowed to persist and become far advanced, it is difficult to do anything with them.

I was pleased to hear the Doctor present the viewpoint of conservatism as against radicalism in the treatment of these cases. As he said, it has usually been the procedure to institute some radical operation in these cases. I think we can say the same thing about cancer of the bladder as cancer of any other place: If cut and not cured we have done the patient more harm than good. If we can treat them by using methods which allow us to continue with a closed bladder, we have a great advantage.

The recent application of radium has worked wonders in many of these cases. On the other hand, I have observed several of these tumors before we had radium disappear with fulguration treatment alone, where they were reported by the pathologist to be of a malignant character.

These tumors may occur at almost any age. Usually they occur a little later on, but Dr. Moore has shown they also occur in young individuals.

So with any symptoms of bladder disturbance and urinary findings which might suggest bladder tumor, I do not think we should deter making a complete physical examination on account of the age of the patient.

DR. CLARENCE MARTIN, ST. LOUIS: I think the paper has impressed us with the seriousness with which urologists are taking up this problem. We are agreed that since every tumor of the bladder has unquestionably a malignant future, we should investigate them thoroughly, and at the earliest possible date. In my own work, the average patient gives a history of bleeding that began eighteen months previous to his first cystoscopic examination, so our golden opportunity has been lost by the time the patients reach us.

I rather lean toward the point the Doctor emphasized of conservatism in these cases. In general, I believe the patient is better off with his growth treated through the urethral canal with radium, for instance, rather than opening him up and giving him a sinus that might be disagreeable later on. I think this conservative plan will be the one we will continue to follow until more definite ideas have been developed.

DR. H. MCCLURE YOUNG, ST. LOUIS: I think it is important in the first place in the examination of

all these tumors to note their situation and also their cystoscopic appearance. A tumor near the trigone is almost inoperable, whereas if it is situated over the dome of the bladder it can be removed. A tumor which has a pedicle I believe should be fulgurated. I prefer the bipolar current; it is more easily controlled and penetrates a little deeper. Our effort should be to destroy the tumor by strangulation. We should begin our fulguration as near to the pedicle as we can place our wire. I have fulgurated tumors as big as a goose egg—one which had a definite pedicle—and that in spite of the fact that its surface was necrotic and there was no opportunity for microscopic examination.

This man had a recurrence about three months after the procedure. I took him to the hospital and burned in quite deeply with the fulgurating current, and he has had no further trouble. That was in 1916. I think we can pronounce him cured. When you have a flat tumor in the vault of the bladder, I think the conservative thing is to cut it out.

I would like to say something about the application of radium. If you open the bladder and have not been able to get all the tumor out, it is better to leave your bladder open and apply the radium with needles. I have not done that, but I have placed radium in the bladder and my results have not been encouraging. One case went rapidly down hill and ultimately died. In another case I would leave the bladder open and apply radium into the tissues. I do not see any objection to doing that.

DR. WM. T. ELAM, ST. JOSEPH: As to the question of the age of these patients, it seems to me if any class of patients would undergo radical operation the two patients referred to could have undergone them, and later radium or X-ray. The location, age, and condition of the patient should, in my mind, determine the method of treatment to be adopted. If you think the lymphatics have been involved further on, then the application of radium, I should say, is indicated, although I have had no experience in its application through an open cystotomy wound.

One thing about the paper in which I was particularly interested and which I think should be emphasized is the fact that carcinoma of the bladder is not confined to men or individuals above the median line of life. I am inclined to think carcinoma of the bladder with young men would run a more rapid course than in older patients, because in patients of advanced years we often find carcinoma of the bladder to be of slow growth and low malignancy. But I believe if I had had the Doctor's cases as described by him, I should have adopted some active surgical measures, as Dr. Young has said, with X-ray or radium following.

DR. NEIL MOORE, in closing: With regard to the surgical aspect of these cases, if the tumor is located where we can get to it without disturbing one or both of the ureteral attachments, I believe open surgery is the method of choice. Later we may follow with radium and X-ray. In these two cases, however, the tumors were located in the trigone of the bladder over that part of the ureter traversing the bladder wall. To do any open surgery on these tumors we would necessarily have had to manipulate the ureter or transplant it.

Dr. Lower says: "Take out the tumor and leave the ureter in the bladder wall and it will take care of itself." All well and good, but there is a possibility of a pyelitis developing, as did in one of these cases, and as has developed in many others. I have seen the ureter transplanted in different parts of the bladder, when infection occurs it will not react to urinary antiseptics by mouth, and we must dilate the stricture because the fibres are contracted.

Then one must go in with a ureter catheter and lavage.

As I cited in case No. 2, if we had manipulated it we probably would not have been able to lavage and he would have lost his right kidney. No matter where the transplant is we are often denied the treatment of pelvic lavage.

Of course, from the standpoint of age the two cases were really good surgical risks, but we must take into consideration the location of the tumor.

THE PRESENT CONCEPTION OF TUBERCULOSIS*

BORDEN S. VEEDER, M.D.

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In the early summer of 1873 a young physician who had developed consumption left New York for the Adirondacks to live his few remaining years—as he says in his autobiography “amid surroundings that appealed to me . . . and longing for rest and peace in the great wilderness.” This young man was Edward Livingston Trudeau, a name that will ever live in the history of medicine. At that time, fifty years ago, pulmonary tuberculosis, or consumption, was considered an absolutely fatal disease; bacteriology was unknown, and to quote Dr. Trudeau again: “It was taught that tuberculosis was a noncontagious, generally incurable and inherited disease, due to inherited constitutional peculiarities, perverted humors, and various types of inflammation.” But Trudeau did not die; instead he returned to his city home that fall much improved, and spring found him once more in the north woods. Again improvement, so much so that his case attracted the attention of Loomis (one of the most distinguished physicians of his time) to the climatic value of the Adirondacks for the consumptive. In 1875 Trudeau made a new plan. Against the advice and opposition of all his friends he determined to spend the winter with the hunters and guides in the snowbound wilderness, and the next year we find him moved to the little lumbering and hunting village of Saranac Lake—a saw-mill, perhaps a dozen houses, an inn, and a school-house. Here he lived for forty years and the little hamlet grew to become one of the best known health resorts in the world. Most of his time these early days was spent in hunting deer, fox and other game, but gradually, attracted by Trudeau's personal experience, a

*Author's Note.—(Public Health Lecture, March 16, 1921.)—This essay is an attempt to put into simple language before a lay audience the basic conceptions which are held regarding tuberculosis. A number of statements may be questioned, but for purposes of a public lecture it is unwise to go into the pro and con of moot questions, and the opinions stated are the author's conclusions. Nothing illustrates better than the subject of tuberculosis the necessity of the medical man constantly changing and revising his views in the light of new facts. Undoubtedly many of the ideas expressed in this paper must of necessity be radically revised in the future.

few other consumptives joined him, and he had of necessity to resume his medical work in a small way as no other physician was located within miles.

As Trudeau's health improved he began to take more and more interest in his profession and one day in 1883, some ten years after he had gone into the woods to die, he ran across a reference in a medical journal to an article published by Robert Koch in Germany in 1882, on the "Etiology of Tuberculosis." In this epoch-making article Koch asserted that three years' investigation had led him to the conclusion that a specific germ, "the tubercle bacillus," was the cause of this widespread disease. Through a friend Trudeau obtained a translation of this article, and, as he says, "the glamour of its possibilities in the prevention and cure of the disease took hold on my imagination." To most physicians the relation of this germ to tuberculosis, a fact so self-evident to us today that it seems hardly possible that it was discovered less than forty years ago, was a subject for jest and scoffing, but not to this man in the wilderness. Becoming convinced of the soundness of Koch's deductions even though "it read like a fairy tale," he took the first opportunity to get in touch with a young physician in New York who had just returned from working in Koch's laboratory and learned from him how to stain this tubercle bacillus so that he could examine it with a microscope, and soon we find him applying this information to the examination of specimens of sputum for purposes of diagnosis. He built himself a little laboratory in his cottage in the forest and with crude homemade apparatus, without gas, water or electricity, made a series of experiments which has influenced every conception of tuberculosis we hold today. Can you not picture this wonderful medical drama that was developing, the entire conception of the causes and the processes, the treatment and the prevention of one of the greatest scourges of mankind, changing and evolving under the eye of that little man in his wilderness laboratory.

Koch found, and Trudeau and many others have repeated the experiment, that if you take an animal, say a rabbit, and inject some of these tubercle bacilli under the skin you will produce a nodular growth, or shot-like inflammatory reaction—a tubercle—from which the disease gets its name (tuberculosis meaning full of tubercles.) If large numbers of these bacilli are injected many of these tubercles will develop and the disease will rapidly spread and sooner or later the animal will die, but if a very few are injected, or if the organisms have a very low degree of toxicity or poor powers of multiplication, or, as we usually say, are not virulent, the disease may not

spread. A tubercle will develop in the latter circumstances at the site of the injection, but the neighboring lymph glands will swell and prevent the spread of the disease to the rest of the body. It is somewhat similar to the way in which the glands of the neck swell when you have a sore throat, for it is the purpose of lymph glands to prevent the spread of the invading or infecting organisms or poisons. So in its simplest form in the animal experiment the question of whether or not death will occur from the injection of the tubercle bacilli depends upon the dose or number of organisms entering the body, and upon their virulence or power of multiplication.

Let me now quote a classic experiment of Dr. Trudeau's. Interested in the question of climate, rest, fresh air, and food upon the development of tuberculosis he inoculated five rabbits with tubercle bacilli and turned them loose on a little island in the lake where they had abundant food and the best surroundings obtainable. Five more rabbits were inoculated with tubercle bacilli in the same way, but were confined in a small, dark, damp place where the air was bad. Within three months four of the confined animals had died and their organs showed extensive tuberculosis. All but one of the rabbits allowed to run wild recovered. These simple experiments express the two fundamental underlying factors which determine what takes place when the tubercle bacillus enters the human body—it is a question of the number and virulence of the germs on the one hand and the resistance or physical well being of the individual on the other.

To detail again in a simple way another basic experiment in tuberculosis: If the animal is inoculated with a non-fatal dose of tubercle bacillus, it is often possible to give it a second larger dose without killing the rabbit—a dose that would be fatal to a normal animal. In other words, the first non-fatal dose has in some way conferred increased resistance to second re-infection. This condition brought about by the specific action of the tubercle bacillus I will henceforth refer to as immunity. This resistance of the tuberculous rabbit was recognized by Koch and today it is the phenomenon about which most of our medical work and hopes center.

And now, as far as our knowledge of the processes of tuberculosis is concerned, comes a remarkable development. Koch, the master and great discoverer, sought after false gods; while Trudeau, the disciple who had never seen the master, followed, unwittingly perhaps, the true light. Koch after his discovery of the organism gave up much further study of the action of the germ in the human body and centered his attention upon an extract made from the germs grown outside of the

body in a test-tube. This substance he called "tuberculin." In 1891 he announced that tuberculin could be used in the treatment of consumption and was a cure for tuberculosis. The cures that have been announced since are legion, but all, unfortunately, have met the same fate as tuberculin, for it proved to be a false hope and led Koch for years to defend bitterly a claim we now universally know to be false. But this same tuberculin, though not a cure, led to another important discovery. Some fifteen years later von Pirquet, an Austrian pediatrician, noted that if a little tuberculin is rubbed or injected into the skin of a person who at some previous time had been infected with tubercle bacilli a small inflammatory reaction took place. This was independent of whether or not they had ever had the disease we call consumption. If there had been no infection previously, no reaction occurred. But the startling thing was that in Vienna it was found that nearly every child over ten years of age reacted. This was confirmed in cities all over the European and North American continents. Here in St. Louis we found nearly 40 per cent. of the children reacted before puberty. The denser the population and the more congested the environment in which the child lives, the greater the percentage of positive reactions that are found. Thus the child in the slums reacts more frequently than the child in the small town or in the better parts of the city. There was only one deduction possible—during childhood a large part of the children of our civilized countries become infected with the tubercle bacillus. And so we have become accustomed to speak of two things—tuberculous infection and tuberculous disease. Both are due to one and the same thing, the presence of the tubercle bacillus in the body. By tuberculous disease we mean a condition in which the bacilli are growing and spreading and causing the destruction of the lungs and other organs. The individual is sick and has fever, is losing weight, coughs perhaps, and looks and feels sick. By tuberculous infection we mean that although there is a small lesion produced by the bacillus, the condition is inactive. No symptoms are present and so far as the patient himself feels, or physical examination shows, he is a normal individual. It was this delicate tuberculin reaction which demonstrated that almost everyone has an infection with the tubercle bacillus. But we know that far from everyone has the disease tuberculosis.

Let me digress to tell you a little of the disease tuberculosis. Early in childhood a great many children die of tuberculosis. The disease in early childhood has a tendency to spread like wildfire throughout the body, involving many organs and usually is rapidly

fatal. A little later this rapid acute form becomes less common and we see in addition the slow, localized, chronic process in the glands and the bones and joints, one of the most common causes of the crippled children we see in the streets. Then in later childhood through the period which we commonly speak of as the school age, the disease tuberculosis is relatively uncommon. But now the period of the young adult is reached and again we begin to find many deaths from tuberculosis, and the disease takes on a more chronic type, involving the lungs, and this we call phthisis or consumption. In this form the disease is characteristically slow and chronic when we compare it with the rapidly acute type in the young child, and it is limited chiefly to the lungs rather than invading the various organs of the body.

Let me try to bring these facts together and tell you what today we know takes place in a very large percentage of individuals. The infection comes from the organisms that are scattered widespread by the expectorating consumptive, gaining entrance into the body. As a rule infection takes place through the air, and hence we have one of these small primary tubercles formed in the lungs and the progress of the infection is limited by the lymph-nodes along the big air passages. At times in young children so many organisms are taken in, or the child has such a low natural resistance, that this blocking off does not take place and the germs spread throughout the body, causing a rapidly fatal disease. At times and especially in some localities, the tubercle bacilli are taken with the food and the primary nodule develops in the intestinal tract. In the majority of cases there is no evidence of this small tubercle being formed and we recognize that it has taken place only when tuberculin is injected in the skin. What follows is most important. This small, primary nodule seemingly produces substances, which, just as in the animal experiment I told you about, increases the resistance of the individual against reinfection, or, as we say, gives him immunity, or, as I may perhaps better describe it to you, vaccinates the individual against further infection. It gives an immunity analogous to that following an attack of measles, but, unfortunately, not so absolute. There is no question that throughout our entire lives we frequently either inhale or ingest tubercle bacilli, but usually the dose is so small that the immunity which is conferred by this early vaccination protects us. But for some reason or other this immunity may decrease, and if we have but a partial immunity or insufficient vaccination we find developing a chronic type of tuberculosis, slow as a rule and limited usually to the lungs, and this we call consumption.

We can get definite, specific, concrete evidence of conditions which lower the resistance. For example, we know that at times some intercurrent disease, as measles in particular, will definitely lower the resistance to the tubercle bacillus, and so following measles we very frequently find pulmonary tuberculosis developing. Or again we know that the general physical well-being of an individual depends upon a number of factors. Lack of sleep, overwork, bad air, etc., will tend to lower the normal well-being of an individual, and with it the individual's resistance against infection, and so we find consumption developing in those people who are badly fed and housed and who fail to take proper care of their bodies.

The discovery that tuberculosis was due to a germ and hence was an infectious disease at once overthrew the idea of generations that tuberculosis was inherited. It is frequently seen in parent and child for the very simple reason that the intimate relationship in which the two live affords frequent opportunity for massive infection. The parent may infect the child, but the child does not inherit the disease. It has been shown a number of times that calves born of tuberculous cows and taken away immediately after birth do not become tuberculous. This idea of inheritance has been one of the most difficult views to overcome among the laity. Another question related to this is the question of family or racial resistance to tuberculosis. In some of the South Sea Islands the disease was introduced by traders and missionaries into tribes which had previously been free from tuberculosis. Thence the disease took on the rapidly acute fatal type similar to the picture seen in young children, and it was only after a period of years that the chronic slow type of pulmonary tuberculosis, which is so frequent with us, began to develop. Numerous instances of this kind are on record. The American Indian was practically wiped out by tuberculosis and the Eskimos are rapidly disappearing. The introduction of the so-called civilization of the white race, with its mode of living and customs, among the so-called uncivilized peoples has proven in too many instances to be their death knell, as wherever tuberculosis has been introduced into a virgin soil, this acute rapid type has developed which has decimated the inhabitants. The explanation does not lie in an increased inherited resistance of the white race, but is apparently due to the fact that the disease has been prevalent among them for generations, and hence the young child has the opportunity for and acquires an early mild infection which gives a certain degree of resistance to late infection. One of the best examples of this is found in the Jewish race. It has long been recognized that among European

Jews there is a low incidence of and a low death rate from consumption, which in the past has been regarded as a racial peculiarity. Much found, however, that in Jerusalem the Jew from Arabia showed a high incidence of tuberculosis. By the tuberculin test it has been shown that the European Jew who shows little tuberculosis practically always shows an early childhood infection, but that the Arabian Jew does not react as a rule and as a result of his failure to gain an immunity in childhood, he acquires the rapid fatal type of disease when exposed in later life. This so-called racial immunity or family immunity actually depends upon whether or not this early vaccination brought about by the entrance of a few tubercle bacilli has or has not taken place in childhood.

Let me group together now these various factors, for upon them all of our scientific knowledge of the processes and prevention of tuberculosis depends. Due to the fact that we are living in what I might term a tuberculized civilization, practically every child becomes infected with the tubercle bacillus (as at some time he becomes infected with measles, chickenpox, etc.). Unless directly exposed to massive infection from contact with an individual with an open tuberculous lesion, as a rule only a small number of organisms which are attenuated or non-virulent gain entrance into the body. These produce one or more small tubercles, but the infection does not spread beyond the lymph glands, and as time goes along this small tubercle becomes isolated. Fortunately, in some way or another, this tubercle continues to pour out or furnish some substance which prevents the development of further tubercles from organisms which subsequently gain entrance into the body. In other words, infection with tubercle bacilli is a disease of childhood, and as a rule this primary infection produces an immunity or vaccinates the individual over a period of time. But if the young child acquires a massive infection, as happens so frequently when a child lives in most intimate contact with a tuberculous parent, the infection spreads rapidly through the body and we have a general disseminated form of tuberculosis which leads rapidly to death. Thus we see in early childhood a number of rapidly fatal cases. For a period of years, however, we see very little tuberculosis which we realize now is due to the immunity produced by this vaccination. Now later on, in early adult life, there seems to be a loss to a certain degree of this immunity, either partial or complete. This is brought about by intercurrent infections which lead to the disappearance of this immunizing substance in the blood, or the individual loses his general resistance as a result of over-work, bad hygiene,

etc. This permits either of a spread of the old infection which has been dormant or latent all these years, or, what is seemingly more probable, it permits again the growth of tubercles from new organisms which gain entrance into the body. The changes which have taken place in the body, however, as a result of the primary infection have so altered conditions that instead of this acute fatal type of tuberculosis rapidly spreading throughout the body, we find as a rule a slowly developing chronic process limited to the lungs. This is the pulmonary tuberculosis, or consumption or phthisis, which far outnumbers all of the other forms in which we see the disease developing.

Not only will Dr. Trudeau's name be remembered for his work with the tubercle bacillus, but among the many unfortunates who develop the most common form of tuberculous disease—consumption, it will be even more remembered in connection with the development of the modern methods for the treatment of pulmonary tuberculosis. As I told you, Dr. Trudeau went into the woods to die, but, living as normal as possible an open air outdoor life he lived. Early in those Saranac days he began to look about for some means of affording people from the city an opportunity to live the life that he found so beneficial, and with this in view he raised funds among his friends for the erection of a small wooden shack at Saranac which was the beginning of the famous Adirondack Cottage Sanitarium, which is better known as Trudeau, and which has served as a model for a group of institutions which have sprung up like wildfire throughout the country. It was in these early days that he ran across an account of Brehmer's and Detweiler's Sanitaria in Europe for the treatment of tuberculosis. Without any knowledge of the causes of the disease they had hit upon the necessity of open air, rest, and the regulation of the patient's life and habits, which today is the accepted basis of all tuberculosis therapy. One of the most interesting facts in medicine is the way in which most of the methods of treatment in use today were hit upon empirically by the clinician in the past, and not until years later the scientific basis of the method worked out.

As I have said, from the time of Koch's announcement of the curative value of tuberculin in 1891, the world has been flooded with false tuberculosis cures. Any drug to bring about a cure for tuberculosis must wipe out of existence the structural changes which have taken place in the body, or at least prevent further changes and the further growth and spread of the tubercle bacillus. So far no drug has been found which has this action. There is no cure by drugs or medicines. Any-

thing advertised to do this is false and is designed to mulct the poor, distracted consumptive searching frantically for something to prolong his life, as the drowning man catches at the straw.

Logically, as you can realize yourselves from what I told you of the nature of the infection, the basis for treatment lies in building up the specific resistance of the body against the bacillus which is growing and spreading, for we know that this is nature's way of preventing us all from developing the disease tuberculosis from the organisms which are constantly gaining entrance into our lungs with the dust of our homes and city streets. This was Koch's idea of the action and purpose of tuberculin. Many attempts to increase the specific resistance have been made. The use of nonvirulent attenuated strains of organisms has been suggested and if such a strain can positively be obtained there is some possibility of its being of service. There are a number of organisms resembling the tubercle bacillus, which produces tuberculosis in man, found in other animals. Thus an avian or bird strain, a bovine bacillus found in cattle, etc. The notorious turtle germ which Friedman exploited as a cure for consumption and which he claimed to have isolated from a turtle* belongs to this group. While, as in the case of tuberculin, there is a theoretical ground for experimentation with these organisms, as yet none has proved of value. Many of the best medical minds of our generation are working quietly and hopefully in laboratories such as the one in which this lecture is held. Only by giving such opportunity for the trained investigator to work can any result ever be expected to be obtained. In this search for a substance which will act specifically against the tubercle bacillus lies our only hope of a sure cure. We know, from what I have told you about immunity, that there is such a substance, and towards its isolation or production in the human being our efforts must be directed.

But the situation is not hopeless. This specific resistance is seemingly intimately related to what I may term general resistance on the part of the individual. By building up the general resistance it is very frequently possible to overcome the disease, and today there are hundreds of thousands of recovered cases of pulmonary tuberculosis or consumption walking our streets. It is in the light of this idea that we see the purpose of rest, fresh air, and good food. They are aids in building up the resistance of the individual, not curative in tuberculosis. Rest, physical and mental, is the sheet anchor of treatment. This is where the sanitarium comes in. It gives the individual a chance to rest in open air environment, together with the mental stimulus from the con-

stant contact with the hopeful trained physician in phthisiology. The question of climate is always in the mind of the consumptive. There is nothing in climate in itself. It is only that one climate may permit of more open air and sunshine than another, or that some people have a sense of physical well being in a cold climate and others in a warm. Climate alone will not cure; with it must go regime.

The question of whether or not it is best to go away from home for treatment is an individual one. First of all financial considerations are important. The indigent tuberculous patient who goes to another climate is far worse off than the one who stays at home. On the other hand to the person who can afford a change, it is apt to be far easier to live the necessary restful, quiet, peaceful life away from his usual friends and business associations and with a group of people who are trying as their one job in life to regain their health, than it is to stay home and change the entire manner of living and to drop out of the routine of our usual daily existence. Against this must be weighed the depression which comes to many individuals on their separation from their friends and home life. It is an individual question.

Before taking up the question of the prevention of tuberculosis, let me insert a word in regard to what is one of the most pressing and urgent problems in the realm of tuberculosis, and that is the problem of the individual who has overcome an active process. Rather than say he is cured, I prefer to say in whom the progress of the disease has been arrested. As a rule it is necessary for this individual to change his occupation. For the indoor garment worker, for example, or the clerk, to return to the slum or his former work after his case has been arrested is but to invite a second breakdown. Further there is an unnecessary feeling against the ex-tuberculous, or a stigma, which often prevents him from obtaining work of a suitable kind. Not only is a second breakdown usually the beginning of the end with the tuberculous, but it is, as a rule, a very expensive thing for the community. What is perhaps most of all needed today is the development of towns or colonies or communities where the ex-tuberculous may engage in occupations that are not dangerous to his continued well-being, and where he can become a self-supporting member of the community. Not only are there numbers of actually arrested cases, but there are large numbers of individuals who have such a slowly progressing disease that they can accomplish very much in a suitable environment. Seemingly Dr. Trudeau himself was one of these cases, for his disease was apparently never absolutely arrested, but lighted up

again and again, and I know of no man who has had a more useful life or a life more full of service to his fellowman.

This brings me to the final phase of my discussion, and that is the question of prevention, for, after all, the prevention of disease is the real goal for which we must strive. In discussing the question of prevention we must distinguish between two things which have been very much confused in the past. The prevention of infection with the tubercle bacillus and the prevention of the disease tuberculosis have usually been considered one and the same thing. From what I have tried to develop in my lecture, I hope you realize that they may be regarded as two different (even if related) problems.

In the light of what we know today regarding the subject of immunity, it is very questionable whether from either a theoretical or practical standpoint the prevention of infection with the tubercle bacillus is a desirable thing. If we could wipe out tuberculosis throughout the entire world it might be a different matter, but if we were to wipe it out in but one country, or even a widespread territory temporarily it is an open question as to whether the end result would not be disastrous. For illustration, let us suppose we could wipe it out in America for a period of years, granting that such a thing is possible, though we know that practically it is impossible, but the disease remained existent in some other part of the world. It would be but a short time before it would again be introduced into the United States and then the infection would meet virgin soil. What we might expect to happen under these circumstances would be the development of the acute fatal type, such as was seen in the South Sea Islands, portions of Africa, etc., when tuberculosis was introduced from without. In other words we have reason to believe in the light of our knowledge of today that the failure of infection in childhood, which takes place as a result of this tuberculization of our civilization, would destroy all the immunity which we as a race or nation possess and would render us highly susceptible to developing the fatal type of disease.

But then you can ask me with all fairness: "Are not all of the measures for the isolation and control of tuberculosis which have been enacted and adopted within the last fifteen or twenty years wrong?" By no means. This immunity is brought about by the introduction of a few organisms or of organisms which have lost a large part of their virulence through lack of a suitable environment for their development. If a person without immunity is exposed to the infection with massive doses or repeated infection with small quantities of

virulent organisms, as is apt to be the case when a non-immune person lives in close contact with a careless consumptive who is expectorating without any regard to his family, we know he is very apt to develop not the infection which gives immunity, but the disease which leads to death. Statistics show over half of the young children who have died of tuberculosis at our Children's Hospital have been directly exposed to a known tuberculous parent. It is very probable, moreover, that when consumption develops in an older person, who has had through his school age some degree of immunity, that in many of these instances infection with a massive dose takes place. So we see that every bit of propaganda for the education of the consumptive is most important. It is very wise to separate the advancing open cases which cannot be stopped or arrested, and if necessary, to forcibly detain in special hospitals those patients who move from house to house infecting one place after another and having no regard or thought for the welfare of other people. So also is it most important to separate young children from parents with an open pulmonary disease.

But perhaps the most important phase of prevention is the prevention of the development of the disease in the young adult, or in individuals who in all probability have had earlier in life an immunizing infection. As we have stated this is apparently a question of resistance, and consequently everything which has to do with maintaining the general well-being of the individual helps in the prevention of the development of consumption, and inversely everything which impairs the resistance of the individual is a danger. Let me give you a concrete example of what I mean. The European war led to the undernourishment of thousands of individuals. There was an actual lack of the necessary quantity of food required to maintain the human body in a good condition of nutrition. Children in Europe today actually average several pounds below the weight for their age which they had previous to the war. Further, the lack of clothing, fuel, etc., plus the worry and grief of war, the development of epidemics such as influenza and typhus, have combined and aided in producing a general impairment of the strength and health of the inhabitants of Europe, and we have seen associated with and following the great war a marked increase in the number of cases of tuberculosis. It is most interesting to note that in some localities where an intensive study has been made there has been no increase in the number of the acute rapid type of cases, but the increase has been almost entirely in the number of

chronic cases of phthisis—the type which develops when resistance is low.

If we go back over the vital statistics of tuberculosis we find that a general decrease in the number of deaths from tuberculosis has been taking place. Some of my friends who have been particularly interested in the last few years in the anti-tuberculosis campaign have attributed this more or less steady decrease in the last ten or twelve years to the result of their efforts directed specifically against tuberculosis. As a matter of fact this decrease has been taking place steadily during the last century, decade by decade. Very little of it has been the result of measures of the anti-tuberculosis campaign, directed specifically against the tubercle bacillus, for this campaign, let me call to your attention, has not been in existence more than some fifteen years. The reduction in the tuberculosis mortality has gone hand in hand with the general improvement of the health conditions of the nation. When typhoid fever has been wiped out in a community by the development of a clean water supply, at the same time we find the tuberculosis death-rate decreasing. Everything which tends to improve the general health of our people, as pure water, milk, better housing, clean streets, parks, control of smoke, etc., aids in improving the health rate of the city and the lowering of the tuberculosis rate, is but an expression of this general improvement. I am not in any way decrying the work of the anti-tuberculosis campaign, because it has put over to the people ideas regarding good health which they have never had before. My point is this, the tuberculosis problem is only a part of the general health problem and it cannot be separated. It is, as you see for these basic reasons which I have given you, absolutely tied up with the problems of child welfare, the health of school children, labor laws, housing laws, health pensions and insurance, etc., as well as education of the individual in the proper habits of living.

What is the future of this question of prevention of tuberculosis—our greatest cause of death? We must continue the education of our communities and of individuals in the proper way of living; we must give to every individual the right and opportunity to live and work in conditions that will not impair his health; we must develop sanatoria with proper treatment for the early cases of tuberculous diseases, which can be arrested or cured, and we must develop the opportunity for the cured consumptive to earn his living in an environment which will protect him from a second breakdown. But these are not fundamental. The fundamental problem which we have to meet is a scientific medical one. Today we be-

lieve that most of us are alive because nature has vaccinated us or given us an immunity against the tubercle bacillus. Unfortunately this vaccination is an uncertain, indefinite, haphazard sort of an affair. It is one over which we have no control, and it is the impairment or loss of this immunity which leads to the development of consumption. The future of the prevention lies in the discovery or the development of a method of artificial immunization to take the place of this uncertain natural one. There is every evidence and reason to believe that it will not be many years, and mind you it was only forty years ago that the tubercle bacillus was discovered, before a method of immunization through living tubercle bacilli will be developed so that we can accurately regulate the processes of immunization. In some such way as this I have no fear or hesitance in saying tuberculosis will eventually be controlled and regulated, and to future generations the disease, let us hope, will become a matter of medical history.

Humboldt Building.

RADIUM THERAPY IN DISEASES OF WOMEN

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The object of this paper is to bring to the attention of the general practitioner a therapeutic measure, while not new, yet its value is little known to the average physician. By this I do not refer to its intrinsic value measured in dollars and cents, for I think all physicians, the laity as well, are posted on this point in regard to radium. Yet, to my mind, this is one of the chief factors why doctors know so little of its therapeutic value. They have thought of the price only and considered it prohibitive for their use and dismissed it from their minds, without giving any thought to its therapeutic value. Yet today regardless of its high cost, radium has forced for itself a place in our armamentarium, and is as much an agent of value to the physician in his daily work as any drug in our materia medica, and, in many cases a rival of surgery.

In this article, however, I will confine the therapy of its uses to the diseases of women most frequently treated by the general practitioner; for what doctor doing general practice cannot truly say that if you take from him his gynecological cases, you will take 50 per cent. of his practice. Yet, he will admit that a great deal of this work is unsatisfactory to both the patient and himself, for the reason that many of these cases will not submit to even minor surgery, as is often indicated; again in giving local treatments many patients will not inconvenience themselves to make the frequent visits to the office the case

demands. Most of these patients are between the ages of 35 and 50, and usually have family cares that take all of their time. They call on you and you outline your treatment; they start in good faith; take a few treatments, then you hear nothing of them for two or three months; again they appear on the scene with the salutation, "Doctor, I am no better."

Now, in many of these cases, as I shall describe later, one or two applications of radium will give relief; this, too, without an anesthetic, a long stay in hospital, or without a cutting operation—all of which are dreaded by most women.

While I do not advocate that radium is superior to surgery in all the pathological conditions that I shall mention, yet, with its simple application, freedom from pain, I think it behooves us as physicians to bear in mind that in selected cases radium is the treatment of choice.

Perhaps your patient is not a good surgical risk, or she is of the hysterical type and objects to an anesthetic, or for numerous other reasons she may decline any treatment which to her mind would produce the slightest amount of pain.

Quoting Dr. Howard A. Kelly at the 42nd annual meeting of the American Gynecological Society, held in Pittsburg, Pa., in discussing "Radium Treatment of Uterine Hemorrhage, Due to Other Causes than Malignancy," in part he states: "Radium therapy is as simple and safe as dilation of the cervix. It practically always cut short the menstrual function and so simply obviates the need of hysterectomy; 7 of 100 patients had heart disease, 2 epilepsy, 2 insanity, and others Bright's disease or tuberculosis—manifestly bad risks for hysterectomy. No serious sequelae followed the radium treatment.

Now, just what diseases of women can we treat with radium? The answer to such question should always be qualified, as a therapeutic measure must always be selected for the case in hand. First, let us take up fibroids, a very common trouble, the symptoms of which I need not mention—for what doctor has not treated such cases by prescribing ergot, rest in bed, tonics, etc., and insisted upon operation, but to no avail. Such cases usually react well to one or two applications of radium. Again we will take the woman who perhaps has reared a family, or is a maiden lady, yet has always enjoyed fairly good health, but now she has reached the age where we should expect the menopause, but it is one of these aggravating cases, and she complains of being weak, nervous, cannot sleep, has palpitation, profused menstrual flow and that classical symptom, "hot flashes." The microscope reveals no malignancy. It is perhaps one of

those cases of aberrant ovarian function, and in the past we have been obliged to tell her she would have to be patient and wait for the menopause. Now, Doctor, in such cases, if you will try radium you will see it work wonders. Here again permit me to quote Dr. John G. Clark of Philadelphia, in discussing radium therapy in uterine hemorrhage of benign origin: "In cases of hemorrhage of the uterus of benign origin, such as that from small myomas or myopathic change, particularly in women over 38 years of age, radium in small doses is one of the most effective remedies, relieving practically all of the patients from even the slight hazard of a major surgical operation. The hemorrhages in such cases stop promptly and with rare exceptions permanently, without untoward effects incident to the use of radium. Those near the menopause respond best. Cases in former years, in which even repeated curetages failed to alleviate the hemorrhage, are promptly terminated after the application of 50 mg. of radium for twenty-four hours. In over 100 cases there has been but one failure to relieve the hemorrhagic symptoms."

Next, let us take up leucorrhea, one of the most common conditions and one of which we give too little attention. In these cases, I always think of the woman who appealed to her physician to give her something for the "whites." He was a good doctor of the old school. He took her by the hand and said: "Jennie, don't worry about the 'whites,' they don't amount to anything." Jennie was an intelligent little woman; she looked the old doctor in the eye and said: "Doctor, did you ever have the whites?" He smiled and answered in the negative. "Well," she said, "suppose you had a purulent, foul discharge coming from that part of your anatomy day after day and month after month, and were obliged to wear a napkin all the time? Would you think it amounted to anything?"

The radium treatment for leucorrhea has proven highly satisfactory. In endocervicitis and endometritis, we get good results by applying radium. In the ulcerated cervix that you have been unable to cure with your local applications and your patient refuses to submit to surgery, radium will serve you well. In urethral caruncle, a most painful condition, radium usually cures. It relieves pruritus vulva, kraurosis vulvae et vaginae, better than most any other treatment. In carcinoma of the cervix I think radium is fast becoming the treatment of choice. It is always indicated in these cases; however, I am still an advocate of surgery and radium if the case comes to us in time. But what doctor sees these cases in time for surgery. Yet, no case is too far advanced and should never

be denied the great benefit radium will give. I cannot do better than to quote here from the *Journal of the American Medical Association*, January 17, 1920, page 163:

"Contrasted with the high mortality of the extensive operation for uterine cancer, there is practically no mortality from radium treatment. In place of a dangerous operation (which you will have to refer to a gynecologist) with its attendant suffering, long stay in hospital, and distressing postoperative sequelae, there is the simple radium treatment with a few days' stay in the hospital, no danger and little pain. Again, while less than one-third of those patients who present themselves for treatment are fit subjects for the radical operation, radium treatment is available for all classes of cases, no matter how far advanced. The immediate result of treatment, and the palliation of symptoms, the relief from hemorrhage, pain and foul discharge have been too frequently described to warrant further comment. In all cases the immediate results have been without exception good. The pendulum is swinging toward radium as the method of choice in the treatment of cervical carcinomas."

I wish to add that radium is indicated in many other pathological conditions too numerous to mention here, yet the physician I think should always keep in mind the value of radium in the treatment of sarcoma, epithelioma, birthmarks, Hodgkin's disease, malignant glands, thymic enlargement, keloids, painful scars, goiter, etc.

In closing I wish to say a few words about the indiscriminate use of radium. To get results with this element, which in many respects resembles the roentgen ray, you should first acquaint yourself with its physics and physiological action. This is most important, as I think the renting of radium and attempting its use in a stereotype manner, aside from being a dangerous procedure, has lowered the estimation of radium in the minds of many physicians. And radiumologists will tell you that radium therapy, like X-ray therapy, is not learned from books. Each case will prove a law unto itself, and if you are a beginner in radium work many pitfalls await you. Radium therapy today is fast becoming a specialty of its own and well that it should be, for the field is broad and the physician who succeeds with it must devote a great deal of time to the study of his cases, as many cases are only made worse by the application of radium that can be easily cured by a change of technic. With radium you can only learn by doing. So if you rent radium and fail to get results, don't criticise the radium, but think of your own shortcoming in technic of dosage and screening.

THE JOURNAL

OF THE

Missouri State Medical Association

OCTOBER, 1921.

EDITORIALS

FULL COURSE IN MEDICINE AT STATE UNIVERSITY

At the August meeting of the board of curators of the State University, it was decided that the full four-year course in medicine should be established as soon as proper hospital facilities could be provided. At the recent extra session of the legislature \$250,000 was appropriated for the erection and equipment of a hospital building for the State University at Columbia, the appropriation being made contingent upon the board of curators establishing a full four-year course in the school of medicine. This appropriation gives the University a start toward erecting adequate hospital facilities for instruction in clinical medicine of a quality comparable with the type of instruction given in other departments of the University, and in other medical schools of a first-class type. The Parker Memorial Hospital at Columbia will of course be a part of the hospital system for clinical instruction, and it is hoped that the new Boone County Hospital, soon to be opened, will furnish additional clinical facilities.

The board of curators expects the new University hospital to function also as a state hospital and health center, and a mother to the county hospitals that have been organized, and to those that will be organized, especially in the central part of the state.

The appropriation of \$250,000 is, we are informed, merely the initial fund enabling the University to make a beginning in the erection of a hospital that will meet the needs of clinical teaching in a full course of medical instruction, and that each succeeding legislature will appropriate a similar amount until the sum of \$1,000,000 has been provided for hospital facilities for clinical teaching.

We hope it will not be long before the board of curators can establish the full course in medicine at the University and provide the clinical facilities needed to give adequate instruction on the practical side of medicine. Perhaps we shall see emerge from that institution a large number of young men trained to practice general medicine and willing to pursue that field instead of being imbued with a wild desire and fore-determined resolve to practice a specialty immediately upon their release from the school.

CANCER WEEK

The American Society for the Control of Cancer announces a seven days' campaign to be designated "Cancer Week" from October 30 to November 5. The purpose of the movement is to reach as many persons as possible in the United States and Canada, with the vital message of cancer control. Committees have been established in all parts of these countries; lecture bureaus, made up of interested and authoritative speakers, have been formed, and the campaign will be conducted in accordance with a uniform plan.

Naturally the success of even so conservative a campaign depends largely upon the character and extent of the publicity given; supplementary information from reliable sources by medical writers will be of the greatest value in creating interest and disseminating facts concerning cancer.

There is probably no preventive medicine campaign of more vital importance to all classes of people, nor one which gives promise of greater interest or more hope. It is significant that the death rate from this disease has been arrested. Since 1916 it has remained practically stationary, with only minor fluctuations. This is the most encouraging thing which has happened since the Cancer Society was organized in 1913, and leads to the belief that united effort by all co-operating agencies will not only prevent a further increase in this rate, but will effect a continuous decrease.

No small part in the past attack on this insidious disease has been played by writers in medical journals and the lay press; we must "carry on" even more determinedly in the attempt to rout this, one of the last of the so far uncontrolled scourges.

This is a movement that every county medical society should enter and co-operate with the Cancer Society representatives so that the publicity shall be of a nature that will in-

struct the people and not confuse or mislead them. Drs. Fred J. Taussig and Martin F. Engman, of St. Louis, are directors in the Cancer Society and will have charge of the campaign in Missouri.

PREVENTION OF BLINDNESS

Physicians, nurses and midwives should become familiar with the law passed at the last regular session of the legislature requiring them to drop a prophylactic solution in the eyes of new-born infants. The law does not specify what solution shall be dropped into the eyes of the infants, the choice being left to the intelligence of the physician, nurse or midwife, because there are several well-known standard solutions that will accomplish the purpose of the instillation, namely, to prevent inflammation of the eyes, especially gonorrheal inflammation. The law does however give the board of health power to decide whether the prophylactic that was used is effective and therefore the statute stipulates that the solution shall be one which is approved by the board of health. For the intelligent physician this statutory restriction of liberty to choose his own treatment should not offend because he will use only those solutions that are known to be thoroughly effective and entirely harmless. The same confidence cannot be placed in all nurses and midwives nor a certain class of physicians whose credulity leads them into grievous errors when they use widely advertised articles with bogus formulas and exaggerated statements of the wonders they perform.

The board of health has not yet issued any statement concerning what solutions they will approve, therefore it is to be assumed that no complaint will be made if the report of the birth indicates that the solution used was a satisfactory one.

Another provision of the law requires the physician, nurse or midwife to report to the state board of health or to the county physician, within forty-eight hours after the birth of a child, the fact that the solution was dropped into the eyes and what solution was used.

For the further protection of the eyes of the new-born another section of the law requires the parents or any person having charge of a new-born infant, to report in writing to the board of health or to the county physician if one or both eyes of an infant should become inflamed, swollen or red, and show an unnatural discharge at any time within two weeks after the birth of the infant. The full

text of the law will be found on another page of this issue.*

PENSIONS FOR THE BLIND

With the passage of the law providing for pensions for the blind, physicians are being called upon for information concerning the manner of securing this support for blind persons in their communities. Therefore we give the principal features of the law so our members may direct applicants to the proper officials.

Any blind person seeking the benefits of this law must apply to the Missouri Commission for the Blind, Metropolitan Building, St. Louis, or to the judge of the probate court of the county or city. The Commission for the Blind or the judge when satisfied that the applicant is entitled to the benefits of the law, will issue a certificate to the state auditor. The auditor will then pay to the blind person the amount of the pension in quarterly installments. Every blind person entitled to the benefits of the law will receive \$300 per annum.

Every applicant for a pension must be examined by an oculist or a reputable physician holding an appointment for such purpose from the probate judge approved by the commission for the blind. A fee of \$2 is allowed for such examination, to be collected from the applicant.

Any person having 20/450 part vision or less without or with properly adjusted eye glasses shall be deemed blind but the statement must be in the form of a sworn affidavit by the examining physician.

NECROLOGY

The committee on necrology is very anxious to make a report at the next annual meeting and include the name of every member who has died in the interval between meetings. Such a report is quite an important phase of our activities for it places in our records for all time an account, brief though it may be, of the life and some of the good deeds of those who have been our fellows and friends. While it is true that we have a committee on necrology whose membership is distributed in the various sections of the state, we want every member to feel that it is not only his privilege, but in fact a duty that should be willingly assumed, to report the death of any member in his community. That report may be brief, and need not be a serious effort to write an obituary, although finished articles of

*See page 371.

this kind are very welcome and we hope members will feel privileged to write them over their own signatures. It should include the full name, date of birth and date of death, the cause of death, and some of the outstanding features that distinguished the deceased member during his lifetime. In this way our records will contain a correct statement of facts and the published account when it appears in *THE JOURNAL* will not need correction and revision. It is quite appropriate for members to send clippings from the local newspaper, but in all such cases the spelling of names, date of birth and death, the cause of death, should be scrutinized and made correct before sending the clipping. All this information is quite familiar to the friends and fellow members in the home town of those who have died, but the committee on necrology and the editor of *THE JOURNAL* may easily be led into making erroneous statements if they accept these reports without some confirmatory record.

We believe every member wants the death of a fellow member in his community properly recorded in the archives of the Association, but the very universal trait of humankind to put off doing something that is not an actual necessity is well understood, and for that reason we are now attempting to remind ourselves that this little act is probably the last service we can perform in behalf of a member, and that unless it is performed by one who is familiar with the life of the deceased, it will not be well done.

The members of the necrology committee are published in the list of officers and committees on another page,* and those who may feel prompted to help us in this direction may send the report to any member of the committee or to the chairman, Dr. H. S. Crawford, Harrisonville, or to the editor of *THE JOURNAL*.

HEALTH HABITS FOR SCHOOL CHILDREN

A law passed at the last regular session of the legislature empowers the state superintendent of public schools to establish rules and regulations that will promote the physical development of the children, and provide a means whereby physical defects may be corrected and the sanitation of schools safeguarded. Teacher training institutions are required to give courses in physical education so that teachers may be prepared to carry out the rules and regulations for the physical development of the boys and girls. Any town school board employing thirty or more teachers may employ a

supervisor of physical education and the school board is empowered to raise funds for the purpose of employing such supervisor.

One section of the law requires every teacher in the public schools and the schools supported by state aid to furnish a certificate from a reputable physician showing that the teacher is in good health and free from any contagious disease.

The removal of physical defects and the correction of impairments is to be done under the advice and co-operation of the state health commissioner and the director of the division of child hygiene of the board of health. When the bill was first introduced the correction of physical defects was left to the supervisor of physical education, who would not in all probability be a physician. Our Association opposed that provision of the bill and in conjunction with the director of child hygiene its serious nature was presented to the sponsors of the bill; they readily altered it so that the correction of physical defects and the physical inspection of school children would be done by the state department of health.

MAKING MINES SAFE FOR THE MINER

The International First Aid and Mine Rescue Meet held a contest at St. Louis, September 1-3, to develop quick and effective means of rescuing miners and giving first aid to the injured. The work is performed by teams from mines, and the rewards for winning the contests are various silver cups. In one of the contests a touch of reality was injected into the work when one member of a rescue team became exhausted in the smoke chamber of the supposedly burning mine, and the theoretical rescue work had to be abandoned by his team-mates for the real job of getting him out of the chamber safely.

The problem presented to the entrants was one in which a rescue crew explored a mine following an explosion; they find the entry filled with gases and a small fire 30 feet from the entrance; a miner is lying unconscious on a rib of coal near the bottom of the mine; fire damp covers the path to the man; he is breathing faintly and must be taken from the mine with as little encounter with the gas and fire damp as possible.

The teams were allowed fifteen minutes for the rescue work. They were required to enter the smoke room for a period with their gas masks adjusted. Upon emerging from this room, physicians examined the men and graded the teams on the physical condition of the members. Their pulse action was recorded and demerits given for high pulsation. The

*See advertising page XIV.

teams then adjusted their apparatus and entered the mine. Here they encountered many obstacles which they were forced to pass over and bring the injured miner over. Failure to take precautions of examining the roof of the mine and to test the gases encountered and various other necessary preventives were given demerits by the judges. Grading was also made of the condition of the equipment of each team. Ties for several places existed and the judges ordered the ties worked off. The tied teams were given a second problem.

Frank Farrington, president of the United Mine Workers of Illinois, reviewed the great progress made in mining work and cautioned the delegates that the future progress of the conditions depended on the individual as well as the organized efforts of the men. Farrington recalled that the United Mine Workers were responsible for the creation of the Bureau of Mines by the Federal Government.

The chief judges of the contests were Dr. A. H. Hamel, president of our Association, Dr. R. R. Sayers, Chief Surgeon, United States Bureau of Mines, and Dr. E. H. Hunter, National Director First Aid, American Red Cross. They were assisted by forty other physicians acting as judges. About eight hundred miners and mining representatives attended the meet.

UTERINE CANCER.—Appropriate radium therapy in recurrent and inoperable carcinoma in the opinion of Rex D. Duncan, Los Angeles (*Journal A. M. A.*, Aug. 20, 1921), surpasses any known therapeutic agent. Pain, hemorrhage and odorous discharges are relieved, and there frequently occurs prompt improvement in the general condition of the patient. Life is prolonged, and there results a comparatively high percentage of clinical cures. Radium therapy when employed by one with adequate facilities, skill and experience is the treatment of choice in early, or so-called operable, carcinoma of the cervix. It avoids operation with the attendant suffering, invalidism, complications and high immediate mortality. Symptoms are promptly relieved and there results a higher percentage of cures than from surgery or any other method of treatment. The efficacy of radium therapy depends on an adequate quantity of radium or radium emanation and appropriate facilities, together with sufficient knowledge and experience for its proper application. Proper dosage and technic are of the utmost importance.

TREATMENT OF CANCER OF UTERUS.—Henry Schmitz, Chicago (*Journal A. M. A.*, Aug. 20, 1921), asserts that localized carcinomas must be treated by surgical methods, preferably with the use of the actual cautery, while the borderline and advanced cases should be referred to ray therapy. A combination of surgery with radiotherapy is not advisable. However, a combination treatment of gamma and roentgen rays assures better results than the application of either agent alone. The radium must be inserted into the cervical canal, while the roentgen rays are applied through the suprapubic and sacral regions. This also renders the treatment available for all classes of patients, owing to the lessened expense.



"THE RED CROSS OF PEACE."

NEWS NOTES

DR. T. S. BRUTON, of Seymour, has accepted the position of assistant physician at Mt. Vernon State Sanatorium for Tuberculosis.

DR. HARRY F. PARKER, of Warrensburg, was elected state commander of the Missouri branch of the American Legion at the annual convention held in St. Joseph, September 20.

THE Roll Call of the American Red Cross, the fixed annual period for joining or for the renewal of membership in the organization, will be held between Armistice Day and Thanksgiving, November 11 to 24, 1921.

DR. J. A. WATERMAN, of Breckenridge, a member of Caldwell County Medical Society, has been appointed physician at the state penitentiary, Jefferson City. Dr. Waterman served in this position during the administration of Governor Hadley.

DR. FRANCIS M. BARNES JR., St. Louis, for a number of years medical director at the Glenwood Sanitarium, Kirkwood, has severed his connection with that institution and formed a partnership with Dr. B. Landis Elliott, under the firm name of Drs. Barnes and Elliott, for the practice of neuro-psychiatry.

SEPTEMBER 7 marked the opening of the activities of the Buchanan County Medical Society after a summer vacation of two months. The members assembled at 7:30 p. m. as guests of Dr. C. R. Woodson at the Woodson Sanatorium. Covers were laid for 100 and the boards fairly creaked, laden with many sumptuous dishes. The usual menu of fried chicken, baked ham, Crowder peas and pumpkin pie, and every manner of trimmin', was served. After the dinner speeches and toasts were made by members and out-of-town guests. Dr. Woodson invited the Society to return after the 1922 vacation.

DR. HERMON S. MAJOR, assistant physician at the State Hospital No. 1, Fulton, has resigned that position and will move to Kansas City, where he will be associated with Dr. J. Y. Simpson in conducting the Simpson-Major Sanatorium (formerly the Southwest Sanatorium). Dr. Major has been assistant physician at the State Hospital No. 1 for the past eight years, his service being interrupted during the war, when he was commissioned Captain in the Medical Corps of the Army and assigned to the neuropsychiatric service. He will move to Kansas City October 1 and devote himself to the institutional care and treatment of patients suffering with nervous and mental diseases.

THE Board of Curators of the University of Missouri has voted to establish a four-year course in medicine as soon as hospital facilities can be provided for clinical instruction. For a number of years the medical course at the state university has consisted of two years. The extra session of the legislature, recently adjourned, appropriated \$250,000 for the erection of a state hospital at Columbia for the purpose of providing clinical material for the medical students. It is expected that a similar sum will be appropriated at each session of the legislature until \$1,000,000 has been appropriated for hospital facilities. The legislature also appropriated \$200,000 for the erection of a new building for state hospital No. 2 at St. Joseph.

THOSE who attend the meeting of the Mississippi Valley Medical Association at St. Louis, October 13-15, will be rewarded not only with an opportunity of listening to addresses by some of the best known members of our profession throughout the country, but also by witnessing a spectacle which promises to surpass anything attempted in the line of pageantry during the celebration of the centennial of Missouri's admission to the Union.

This will be a dramatic presentation of life in the early history of Missouri entitled, "Missouri One Hundred Years Ago," written and directed by Thomas Wood Stevens, dramatic director of the Carnegie Institute. St. Louis will be in gala attire from October 3 to 15, many entertaining features being displayed in the open air. The visit of the Veiled Prophet and the grand ball in his honor occurs during that period, the celebration culminating in the presentation of the play at the Coliseum. There will be about six hundred people in the cast, all of them costumed in the apparel and portraying the life of the pioneers in Missouri of a century ago.

THE Tri-State District Medical Society, representing the physicians in the states of Illinois, Iowa and Wisconsin, invites the physicians of Missouri to attend the next annual meeting of the District Society which will be held at Milwaukee, Wisconsin, November 14-17. An impressive program has been prepared for the occasion including the following well-known physicians: Commander William Seaman Bainbridge, United States Navy Medical Department; Dr. Arthur Dean Bevan, Professor of Surgery and Head of Surgical Department, Rush Medical College, Chicago; Dr. Hugh Cabot, Dean and Professor of Surgery, University of Michigan Medical School, Ann Arbor; Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physics, Harvard University School of Medicine, Boston; Dr. Charles P. Emerson, Dean and Professor of Medicine, Indiana University School of Medicine, Indianapolis; Dr. Charles H. Frazier, Professor of Neurosurgery, University of Pennsylvania School of Medicine, Philadelphia; Dr. Warfield T. Longcope, Bard Professor of the Practice of Medicine, Columbia University College of Physicians and Surgeons, New York; Dr. William J. Mayo, Mayo Clinic, Rochester; Dr. Reginald H. Sayre, Professor of Orthopedic Surgery, University and Bellevue Hospital Medical College, New York; Professor De Quervain, Berne, Switzerland.

THE American Public Health Association announces four phases of its semi-centennial celebrations to be held in New York City, November 8-18, 1921:

(a) *The Scientific Sessions* will be held November 14-18. There will be programs of the following sections: Laboratory, Vital Statistics, Public Health Administration, Sanitary Engineering, Industrial Hygiene, Food and Drugs. There will also be special programs on Child Hygiene and Health Education and Publicity.

(b) *Health Institute*, November 8-12. During the week preceding the convention proper there will be organized demonstrations of the various types of public health activity in New York and environs: Health Department bureaus, laboratories, health centers, clinics, hospitals, etc.

(c) *Dr. Stephen Smith*, the founder and first president of the Association, who is now in his 99th year, will be the guest of honor at a banquet to celebrate his approaching centennial and the semi-centennial of the Association.

(d) *A Historical Jubilee Volume*, "Fifty Years of Public Health," will be published about October 1. There will be articles by seventeen authors, relating to the accomplishments and present status of each of the important branches of public health. While concentrating upon the public health of the last fifty years, the book will describe the earlier beginnings of public health in an introductory way, and may, therefore, be considered a general history of public health from the earliest days to the present.

MEMBERSHIP CHANGES, SEPTEMBER, 1921

NEW MEMBERS

Davis, Robert I., Birch Tree.

Draney, Thomas L., 311 Argyle Bldg., Kansas City.

Foster, Forest F., 631 Lathrop Bldg., Kansas City.

Jurgens, Henry J., Edina.

Presnell, Ural A. V., Kennett.

Simpson, James Y., 3100 Euclid Ave., Kansas City.

THE FOLLOWING MEMBERS HAVE MOVED

Bruton, T. S., Seymour, to Mount Vernon, c/o Mo. State Sanatorium.

Callaway, L. M., 515 Chambers Bldg., Kansas City, to 2544 Mersington St.

Carter, Wm. S., St. Louis, to Trenton, Illinois.

Chesney, Alan, St. Louis, to Baltimore, Maryland.

Clark, E. H., Kansas City, to 427 Mass. Ave., N. W., Washington, D. C.

Cook, John, Jefferson City, to Dyersburg, Tenn., c/o General Hospital.

Duffy, Hugh J., 3838 Troost Ave., Kansas City, to 4104 Troost Ave.

Eber, Carl T., 2008 St. Louis Ave., St. Louis, to 1006 Carleton Bldg.

Edwards, E. D., 4216 Shaw Ave., St. Louis, to 302 Chouteau Trust Bldg.

Green, B. L., Annapolis, Md., to 800 Chestnut St., St. Louis.

Hereford, R. G., Ashley, to Wellsville.

Lake, N. E., 824 Rialto Bldg., Kansas City, to Address Unknown.

Loveland, W. S., Verona, to Mt. Vernon.

Rothman, H. L., Washington, to 1411 Franklin Ave., St. Louis.

Shultz, J. W., Weston, to 3026 Walnut St., Kansas City.

Waterman, J. A., Breckenridge, to State Prison Physician, Jefferson City.

Werner, J. P., Marshfield, to O'Fallon.

THE FOLLOWING ARE NO LONGER MEMBERS IN GOOD STANDING

Ash, O. O., Moberly.

Blattner, F. O., St. Louis.

Ferguson, Joseph W., Kansas City.

Graves, John B., Farmington.

Hodges, T. L., Esther.

Lester, Chas. H., Kansas City.

Lester, Rolla B., Desloge.

Long, F. L., Farmington.

McGrew, Wm. M., Norborne.

Meador, A. A., Flat River.

Patton, Wm. G., Winkelman, Arizona.

Pipkin, George P., Georgetown, Colorado.

Scrutchfield, G. E., Rockford, Ill.

Shannon, Chas. W., Halifax.

Urquhart, W. H., Madison.

Walker, John M., Kansas City.

Watkins, Geo. L., Farmington.

Weber, F. S., Farmington.

Wilson, Wm. A., Kansas City.

DECEASED

Bayliss, Wm. M., Clarence.

Brannon, Lloyd H., Hayti.

Leonard, Pierre I., St. Joseph.

Levens, Wm. B., Creighton.

Lipsitz, Samuel T., St. Louis.

Lynch, Lawrence A., Kansas City.

Minor, Richard T., Lesterville.

OBITUARY

WILLIAM BASH LEVENS, M.D.

Dr. William B. Levens, Creighton, Mo., was born in September, 1865, and died at his home August 19, 1921. He was born and raised near Bunceton, Cooper County, Missouri, and obtained his education in the public schools of that county. He graduated from Barnes Medical College, St. Louis, in 1893. He has been a member of the Cass County and Missouri State Medical Society since January 1, 1911.

During the World War he was commissioned a First Lieutenant in the Medical Corps of the Army and was on active duty at Camp Greenleaf, Ga., where he was taken sick with influenza, which was the beginning of the illness that caused his death—tuberculosis of the kidney.

Dr. Levens always took an active interest in his profession as well as in the civic duties of his community. He will be sadly missed by his family, and the community in which he lived.

HARRY S. CRAWFORD, M.D.

WILLIAM M. BAYLISS, M.D.

Dr. William M. Bayliss, of Clarence, Missouri, a graduate of the Kansas City Medical College, 1882, died at his home July 28, 1921, aged 71 years. He was born near Winchester, Va., but when a young man he moved to Missouri and after his graduation in medicine he practiced in Texas for several years. Returning to Missouri in 1887, he located at Clarence, where he made his home from that time until he died. His private practice was interrupted for several periods, as he was identified with movements in the interest of public health and institutions. He served as an assistant physician in State Hospital No. 1 during the administration of Governor Dockery and when the movement was projected to establish a state sanatorium for tuberculous persons, he was appointed chairman of the commission delegated to select the site for the institution and Mt. Vernon was finally chosen. Later, the board appointed Dr. Bayliss superintendent of the sanatorium, he being the first superintendent of the institution. In addition to holding these public offices, he held the position of postmaster at Clarence for six years. He was a member of the Shelby County Medical Society and the Missouri State Medical Association.

SAMUEL T. LIPSITZ, M.D.

Dr. Samuel T. Lipsitz, of St. Louis, a graduate of the Washington University Medical School, 1906, died at the Jewish Hospital, St. Louis, September 2, 1921, from septic pneumonia, aged 36 years. Through his death the profession of St. Louis and the state loses a member whose achievements and skill placed him in the front rank of practitioners. The infection that resulted in his death was contracted from a patient when Dr. Lipsitz scratched his hand on a broken needle while taking a specimen of serum from septic carbuncles. Dr. Lipsitz was assistant professor of medicine in the Medical School of the St. Louis University and a member of the staff of the Jewish Hospital. In earlier years he had served as dispensary physician at the St. Louis City Dispensary. He was a member of the St. Louis Medical Society, Fellow of the American Medical Association, and a member of other medical societies.

CORRESPONDENCE

DID NOT BEAR A SON

Bland, Mo., Sept. 9, 1921.

To the Editor:

About a month ago there appeared in the daily papers of St. Louis a statement that Mrs. Amanda Martin, of Meta, Mo., aged 68 years, wife of Elijah Martin, aged 70 years, had given birth to a son. This news item was widely copied in all parts of the United States and inquiries have come to me from medical men all over the country. All writers sent me clippings of the news item. I referred all inquiries to Dr. Gregory, of Meta, Osage County, Mo., because the remarkable person, Mrs. Martin, was a patient of Dr. Gregory.

Last week Dr. Gregory called me in consultation to see and examine Mrs. Martin. Examination revealed that Mrs. Martin had thought herself pregnant for the last ten months, but physical examination revealed that she was mistaken in her diagnosis. Her uterus is not even enlarged, but shows the usual atrophied condition present at that age. The press reports emanated from the fact that Dr. Gregory was called one night to see Mrs. Martin and the rumor spread that a son had been born to Mr. and Mrs. Martin. I can assure my medical friends all over the United States that Mrs. Martin is not the mother of an infant son and that she will not be within the next nine months; also, that according to medical science, she never will be a mother again.

JOHN D. SEBA, M.D.

MISCELLANY

TREATMENT OF EYES OF NEW-BORN INFANTS

Sec. 7340. *Duties of persons in attendance upon new-born infant or its mother.* Every physician, midwife or nurse who shall be in attendance upon a new-born infant or its mother, shall drop into the eyes of such infant immediately after delivery, a prophylactic solution approved by the state board of health, and shall within forty-eight hours thereafter report in writing to the board of health or county physician of the city, town or county where such birth occurs, his or her compliance with this section, stating the solution used by him or her.

Sec. 7340a. *Parents or other persons shall report.* Should one or both eyes of an infant become inflamed, swollen or red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the parents or other persons having charge of such infant, to immediately report in writing to the board of health or county physician of the city, town or county in which such birth occurs, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exists. On receipt of such report, the board of health or

county physician shall take such immediate action as it may deem necessary in order that blindness may be prevented.

Sec. 7342. *Violation of law a misdemeanor, when.* Any failure to comply with the provisions of sections 7340, 7340a and 7342 shall be a misdemeanor, and shall be punishable by fine of not less than ten, and not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.
Putnam County Medical Society, Aug. 16, 1921.
Laclede County Medical Society, Sept. 7, 1921.
Randolph County Medical Society, Sept. 8, 1921.

PROGRAM OF MISSISSIPPI VALLEY MEDICAL ASSOCIATION MEETING

Statler Hotel (Roof Garden), October 13, 14 and 15, 1921

FRIDAY EVENING, OCTOBER 14, 8:00 p. m.
PUBLIC MEETING

Dr. Llewellyn F. Barker, Baltimore: Oration in Medicine.

Dr. Albert J. Ochsner, Chicago: Oration in Surgery.

THURSDAY MORNING, OCTOBER 13, 9:00 a. m.

Dr. John de J. Pemberton, Rochester, Minn.: "The Surgical Management of Toxic Goiters."

Dr. Lewis J. Pollock, Chicago: "Some Diseases with Increased Movements—Dystonias."

Dr. Wm. T. Corlett, Cleveland: "Dermatology and Its Relation to General Medicine During the Last Half Century."

THURSDAY AFTERNOON, 2:00 p. m.

Dr. A. S. Hamilton, Minneapolis: "The Early Signs of Pernicious Anemia, as Seen from the Neurological Standpoint."

Dr. Albert H. Freiberg, Cincinnati: "Treatment of Congenital Club Foot."

Dr. Herman L. Kretschmer, Chicago: "Some Phases of Genito-Urinary Surgery in Children."

Dr. Reuben Peterson, Ann Arbor: "Roentgenography in Obstetrics and Gynecology."

THURSDAY EVENING, 8:00 p. m.

Social and Entertainment (St. Louis Centennial Celebration).

FRIDAY MORNING, OCTOBER 14, 9:00 a. m.

Dr. Frank Smithies, Chicago: "Liver and Biliary Tract Diseases from the Standpoint of Newer Advances in Diagnosis and Therapeutics."

Dr. Charles H. Frazier, Philadelphia: "The Problems of Intracranial Surgery Relative to Brain Tumor."

Dr. Henry Helmholtz, Rochester, Minn.: "Diagnosis of Abdominal Conditions in Young Childhood."

FRIDAY AFTERNOON, 2:00 p. m.

Dr. Anthony Bassler, New York: "The Incidence of Infection in the Production of Stomach and Intestinal Symptoms. Illustrated Instances of Proven Cases."

Dr. Isaac Abt, Chicago: "Dilation of the Colon in Young Childhood."

Dr. W. S. Baer, Baltimore: "Arthroplasty."

Dr. J. T. Geraghty, Baltimore: "Value of Radium in Malignant Diseases of Bladder and Prostate."

Dr. C. Jefferson Miller, New Orleans: "The Treatment of Fibroids of the Uterus."

SATURDAY, OCTOBER 15

DAY OF CLINICS

Clinics will be held, as per printed schedule obtainable at registration desk, at the various St. Louis Hospitals and Universities:

St. Louis University Medical School.

Washington University, Medical Department.

Barnes Hospital.

St. John's Hospital.

St. Luke's Hospital.

Deaconess Hospital.

St. Anthony's Hospital.

St. Mary's Hospital.

Mullanphy Hospital.

City Hospital.

Missouri Baptist Hospital.

St. Ann's Hospital.

Children's Hospital.

CARTER-SHANNON COUNTY MEDICAL SOCIETY

The Carter-Shannon County Medical Society met according to a call in Van Buren, August 19, with Dr. Frank Hyde, President, in the chair. Drs. A. Johnson, G. C. Anson, W. T. Eudy, T. W. Cotton, and H. L. Meador were present.

Dr. R. I. Davis, of Birchtree, was elected a member.

On motion of Dr. Johnson the meaning of the new law concerning health certificates of school teachers of the state was discussed.

Next in order was election of officers, and upon motion of Dr. Johnson the following were elected: Dr. W. T. Eudy, of West Eminence, President; Dr. H. L. Meador, of Van Buren, Secretary.

Several very interesting cases were reported. Dr. T. W. Cotton reported a case of hernia and also cases of abdominal pain. Dr. Frank Hyde also talked upon abdominal pain. Dr. W. T. Eudy reported a case of strangulated hernia and a case of appendicitis operated upon by Dr. Hyde and himself.

Dr. A. Johnson reported a case of stab wound, and cases of different eye trouble.

All business being over, Dr. T. W. Cotton announced, much to our surprise, that he had a good supply of melons and cigars in store and every member enjoyed his fill of both.

Motion made and carried to adjourn until October 18, at which time we will meet at Eminence.

H. L. MEADOR, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, September 8, at 1:30 p. m., the following members and guests being present: Dr. W. F. Chaffin, president; Dr. H. S. Crawford, secretary, and Drs. Long, Overholser, Ramey and Triplett. Guests were as follows: Drs. Ernest G. Mark and C. C. Conover, of Kansas City; L. J. Schofield, Councilor, of Warrensburg, and Miss Anna K. Westman, Public Health nurse.

Dr. C. C. Conover addressed the Society on the subject of "Cardiac Arrhythmias." His lecture was illustrated by lantern slides, and was very interesting and instructive.

Dr. Ernest G. Mark addressed the Society on "Some Interesting and Unusual Kidney Conditions." His lecture was illustrated by X-ray films, and was full of interest to all present. Both subjects were discussed by the members.

Dr. L. J. Schofield spoke to the Society on "Group Medicine in Johnson County." He gave a brief history of the formation and operation of the Johnson County Clinic, of which he is a member, and answered many questions regarding the plan, which was of much interest to the members of the Cass County Society, as plans are in progress for the formation of a similar group in Harrisonville.

The secretary read a brief obituary of Dr. William B. Levens, a member of the Cass County Medical Society, whose death occurred on August 19, 1921. It was ordered made a part of the records of the Society, and the secretary filed it with the minutes of the meeting.

H. S. CRAWFORD, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its fifth session for 1921 at Kearney, Monday afternoon, August 29. The local committee on program, Drs. Rowell, Epler, Hamilton, and Tadlock, had arranged a magnificent dinner at the splendid Odd Fellows Hall, of which Kearney is so justly proud. Covers were laid for at least thirty-five, with twenty-five in attendance. Dr. Spence Redman, our faithful Councilor, was present. A clergyman, Dr. Ray, of Kansas City, seemed much at home in this meeting, as a minister to the soul. A menu of country ham and "all that goes with it" graced the table, and it was a merry group of scientists and their wives that sat down, after invoking God's blessing and giving heartfelt thanks.

The business session involved several points of ethics, and a motion carried to revise our by-laws and print a sufficient number of copies to place one in the hand of each member. Drs. Suddarth and Gaines were appointed on the committee to attend to this matter.

Stress was laid on the factor of non-attendance. Members in good standing get reputation benefits from membership, but some of them have not attended a single meeting of the Society! Others have

not been in a meeting for over two years. It is difficult to understand the mental attitude of a fraternity that does not fraternize.

The scientific program opened with Dr. E. C. Hill, on "Skin Diseases." The doctor's paper bristled with salient points on diagnosis and common sense in treatment.

Dr. J. H. Rothwell gave a strong talk on the importance of the urinalysis in serious diseases of children. He enumerated many cases wherein tubercle bacilli were the infecting micro-organisms, and warned against neglect in diagnosis of obscure cases.

Dr. Hamilton, of Kearney, presented a clinical case, a patient over eighty years old, with a baffling arthritis in the right wrist. Trauma of many years' standing preceded the trouble. A very interesting case, but X-ray might have revealed more information.

Dr. W. W. Duke, of Kansas City, by special invitation gave a two-hour stereopticon lecture on "The Wassermann Reaction," which demonstrated findings in many hundreds of cases. Dr. Duke explained many phases of the reaction which were intensely interesting and instructive. I regret inability to report the lecture in full.

After full discussion, and a rousing vote of thanks, the Society adjourned to meet in Excelsior Springs the last Monday afternoon in October, from noon till five, preceded by noon dinner. It is hoped that this meeting will have a full attendance.

J. J. GAINES, M.D., Secretary.

LACLEDE COUNTY MEDICAL SOCIETY

Laclede County Medical Society held a meeting at Lebanon on September 5 with Dr. J. W. Lindsey, vice president, in the chair and the following members present: T. U. Gourly, T. B. Herbert, J. B. Atchley, J. M. Billings.

No papers were read but the subject of reporting contagious and venereal diseases was generally discussed.

Dr. J. A. McComb, secretary of the Society, having moved to Springfield, Dr. J. M. Billings of Lebanon was elected secretary. Dr. T. U. Gourly of Phillipsburg paid his 1921 dues which completed our paid up membership and put us on the Honor Roll.

The next meeting will be held at Lebanon on October 3, 1921.

J. M. BILLINGS, M.D., Secretary.

BOOK REVIEWS

KEEN'S SURGERY, VOLUME VIII. By Surgical Experts. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and Clinical Surgery, Jefferson Medical College, Philadelphia. Octavo of 960 pages with 657 illustrations, 12 of them in colors. Philadelphia and London: W. B. Saunders Company, 1921. Price: Volume VII and VIII and Desk Index Volume Cloth, \$25.00 net per set. Sold by Subscription.

There is always difficulty in reviewing a work made up of chapters contributed by various authors. In the instance of the eighth volume of Keen's System of Surgery, this difficulty has been minimized by the unusual discrimination displayed by the editor in the selection of his collaborated editors.

As a matter of fact, it is totally impossible to practice and express any type of satisfactory critique, within reasonable space, on sixty-five chapters. By the same token it would constitute an invidiously

unfair comparison to select a few of the contributions for detailed comment. The only course open to the reviewer, therefore, is categorically to list the subjects in the volume furnishing the names of the various contributors. One does this with few qualms of literary conscience, because such a bare outline will speak forcibly for itself.

Binnie on "The Surgery of Muscles," Vinson on "The Endocrine System of Glands," Charles H. Mayo on "The Surgery of the Thyroid," Wilson on the "Recent Advances in Our Knowledge of Pathology of Goiter," Kendall on "The Chemical Nature of the Thyroid Secretion," Mann on "The Adrenal Glands," Adson on "Surgery of the Hypophysis," Wm. J. Taylor on "Amputations," Warbasse on "Operations on Bones and Joints," Harold Neuhof on "Surgery of the Head," Charles H. Frazier on "The Surgery of the Fifth (Trigeminal) Nerve," Frazier on "Tumors of the Gasserian Ganglion," Richard H. Harte and Walter E. Lee on "War Wounds of the Face and Jaws," Darcissac on "The Role of the Dental Surgeon on the Treatment of Fractures of the Jaws," Schweinitz on "Surgery of the Eye," Chevalier Jackson on "Direct Laryngoscopy, Bronchoscopy and Esophagoscopy," George J. Heuer, "Surgery of the Thorax," George W. Crile, "Surgery of the Abdomen and Pelvis," John B. Deaver and Damon B. Pfeiffer on "Appendicitis," W. J. Mayo and D. C. Balfour on "Surgery of the Gall-Bladder in the Biliary Ducts," Richard M. Pearce and J. Harold Austin on "Tests for Renal Functional Efficiency in Surgical Conditions," Ransohoff on "Surgery of the Kidney," Bransford Lewis on "Surgery of the Bladder and Ureters," Hugh H. Young on "Surgery of the Prostate," Keyes, "Surgery of the External Male Genitals," Norris, "Gonorrhea in Women and in Female Children," McCaw on "Gropical Surgery," R. Tait McKenzie on "The Place of Physiotherapy in Surgical Treatment," Kolmer, "Diagnostic Immunologic Reactions and Specific Therapy in Surgical Diseases," Duane and Greenough on "Radium in the Treatment of Malignant and other Diseases," Cole and Steiner on "The Technical and Clinical Use of the X-Ray," Wm. L. Clark on "Electrodesiccation and Electro-coagulation Methods in Surgery," Armstrong on "The Surgery of the Infectious Diseases," Boothby on "Ether Anesthesia," Lewis S. Booth, "Nitrous Oxide-Oxygen Anesthesia," M. L. Harris, "Local Anesthesia," Hugh Cabot on "Subarachnoid (Spinal) Anesthesia," Church on "Poison Gas in Warfare," H. L. Carson, Esq., on "The Legal Relations of the Surgeon," Colonel Francis A. Winter on "The American Red Cross in War and Peace," W. W. Keen on "Note on a simple, cheap, self-made and effective method of dressing an Inguinal Anus," which has stood the test of twenty-seven years of successful use.

M. G. S.

THE PRINCIPLES OF IMMUNOLOGY. By Howard T. Karsner, M.D., Professor of Pathology, Western Reserve University, Cleveland and Enrique E. Ecker, Ph.D., Instructor in Immunology, Western Reserve University, Cleveland. Illustrated. Philadelphia and London: J. B. Lippincott Company, 1921. 309 p.

In the preface the authors state: "This book has been prepared in the hope that a concise statement of the facts and more important hypotheses concerning resistance to infection may serve to provide a clear understanding of a subject of the utmost importance in modern diagnosis and treatment."

The book is designed primarily for students and practitioners and its "scope is restricted to fundamental principles."

In a masterful manner the authors have selected from the very large mass of literature that which is most deserving of attention in the subject of prac-

tical immunology. They have set down for the reader a very happy combination of the theoretical and practical aspects of the subject. The fact that the subject matter is up-to-date is an important consideration in this subject which has received numerous recent contributions.

It appears to the reviewer that the authors have more than attained the objects of their effort and that they have given the profession in attractive form those phases of immunology which play such an important rôle in diagnosis, therapy and prophylaxis.

G. I.
SURGICAL CLINICS OF NORTH AMERICA. Vol. I, No. 2. April, 1921. New York Number (Saunders).

In this issue of 370 pages there are numerous interesting cases discussed by a dozen of New York's eminent surgeons in the clinics of the various hospitals.

MEDICAL ELECTRICITY, ROENTGEN RAYS AND RADIUM. By Sinclair Tousey, M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Third Edition. Thoroughly Revised and Greatly Enlarged. Octavo of 1,337 pages with 861 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$10.00 net.

The third edition of this standard encyclopaedic text-book by Tousey contains many new things of interest. Especially noticeable are the extensive tables indicating Tousey's exposures for radiographs of every portion of the body in both sexes and for every weight and measurement. There are also extensive tables of exposure for radiotherapeutic treatment.

The volume is remarkably complete, the index is excellent, and there is practically no point in electrotherapy, radiography, roentgentherapy or radium therapy which is not touched upon. The author exhibits a commendable confidence in his ability to discuss any phase of these subjects. His individual experimental efforts are described in detail and there are frequent citations to other authorities supporting his contentions.

E. H. S.

EYE, EAR, NOSE AND THROAT NURSING. By A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Post-Graduate Medical School and Hospital, and Beaman Douglass, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. With 32 illustrations. Publishers, F. A. Davis Company, Philadelphia. Price, \$2.50 net.

This volume of 346 pages has now been filling a very useful niche with the healing arts for fifteen years. It is ably written in a clear and attractive style and sufficiently well illustrated by practical cuts in black and white.

The precise and skillful care of the organs of the precious special senses is detailed in a luminous manner which appeals at once, not only to nurses for whom the book was originally designed, but for medical students as well.

The anatomy and physiology of the organs concerned is given in an easy way so as to illustrate the procedures necessary for caring for the different medical and surgical conditions affecting them.

Everyone will appreciate the value of Dr. Davis' two leading injunctions regarding the care of the eye: 1. Thou shalt be altogether clean and gentle when caring for the eye. 2. Thou shalt not apply poultices to the eye.

A new chapter has been added to this second edition upon the subject of vaccine and serum treatment. Every chapter has been revised and new matter, the result of added years of experience and

study, has been incorporated. Only safe and tried methods have been described. J. W. S.

TUBERCULOSIS OF CHILDREN, ITS DIAGNOSIS AND TREATMENT. By Professor Dr. Hans Much, Director of the Department for the Science of Immunity and for the Research of Tuberculosis at the University of Hamburg, Germany. Translated by Dr. Max Rothschild, Medical Director of the California Sanatorium for the Treatment of Tuberculosis, San Francisco and Belmont, California. New York: The Macmillan Company, 1921, 156 pages.

The title of the work is a trifle misleading, as it does not convey the scope of the book. Over half of the 156 pages deal with the tubercle bacillus, modes of infection, immunity, development of the actual illness, and the treatment by tuberculin, serum, vaccine, partigen, X-ray—and Friedmann! All of these are discussed in an ultra-scientific manner, having the advantage of brevity and lucidity and plenty of common sense. The advantages of the partigen treatment are stressed and apparently proved by logical deduction and results. Time will be the ultimate test of this, of course.

The basis of the book is the fact that nearly all deaths from tuberculosis are due to infection during childhood. And the author's plea is for the treatment of tuberculosis in childhood. This necessitates all the refinements of diagnosis, and they should be applied to every child who is sick without showing very definite evidence of a particular disease. Only in this way will early tuberculosis be discovered.

This gives rise to a criticism of the present day method of attack, i. e., prevention by regulations as to spitting, fumigation, etc. Much's means of prevention is treatment, and keeping children from exposure to known tuberculous people. His stand is one that is difficult to controvert.

The book is a good one, exhaustive even in its brevity, frankly critical, and not too optimistic.

P. G. H.

CLINICAL OPHTHALMOLOGY FOR THE GENERAL PRACTITIONER. By A. Maitland Ramsay, M.D., Fellow of Royal Faculty of Physicians and Surgeons, Glasgow; Lecturer on Ophthalmology, University of Glasgow, etc. With Foreword by Sir James Mackenzie, M.D., F.R.S. London: Henry Frowde, Oxford University Press, Hodder & Stoughton, Warwick Square, E.C., 4, 1920. Price, \$16.50.

This work should be of the greatest aid to all learners in ophthalmology. Written by a teacher who understands his subject fully and is able to impart his knowledge in a simple and understandable way to others, this book will help greatly in the advance of ophthalmic practice. The work might best be designated as an unabridged handbook of eye diseases because of its suitability to be followed in the active practice of clinic or consulting room. Dr. Ramsay is a very conscientious, accurate and capable specialist, who has passed many busy years in ophthalmology. Based upon such a physician's own experiences this work is a valuable addition to medical literature.

The author has arranged his subject matter around the headings of differentiating-symptoms—a method which is much the most practical. Every ophthalmic disorder is treated thoroughly and at length; therapy is taken up in greater detail than is usual in textbooks on eye diseases. The style of writing is very simple and readable, giving clear and definite pictures of each disorder. The illustrations are beautifully executed, many being in natural colors.

The intimate relationship between the eye and the rest of the body is strongly emphasized for the author

is well fitted to do so, since he was engaged for ten years in general practice.

This would seem to be the book par excellence for the physician entering ophthalmology, but any oculist whatever his experience will find it most interesting and helpful.

H. D. L.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ORTHOFORM.—Orthoform New.—Methyl metaaminoparaoxybenzoate.—Orthoform is a local anesthetic which penetrates the tissues very slowly on account of its insolubility. It has no action on the unbroken skin. It is practically non-toxic in the usual doses. Orthoform is used internally to relieve the pain of gastric ulcer. It has been applied locally as an analgesic to wounds of every description. It has been used in dentistry, in nasal catarrh, hay fever, etc. H. A. Metz Laboratories, Inc., New York.

AMIDOPYRINE.—Pyramidon.—Amidopyrine is closely related chemically to antipyrine. Amidopyrine acts as an antipyretic and anodyne, like antipyrine, but is effective in smaller doses. The action, while somewhat slower at the beginning, is more lasting. It is claimed to be comparatively free from harmful influences on the blood, heart and kidneys. It is said to be useful in the chronic fevers of tuberculosis, as well as in the acute febrile conditions of typhoid fever, erysipelas and pneumonia. In the treatment of infectious fevers it, like other antipyretics, should be cautiously employed. Dosage: from 0.3 to 0.4 gm.

AMIDOPYRINE-CALCO.—A brand of amidopyrine N. N. R. Calco Chemical Co., Boundbrook, N. J.

MESOTAN.—Salmester.—Methyl-oxymethyl salicylate.—Mesotan is an active counter-irritant, used especially in rheumatic conditions similarly to the local application of methyl salicylate. It is more irritant than the latter and lacks its odor. It is absorbed from the skin, but its action is predominantly local, relieving pain and swelling. It is not an efficient means of producing the systemic actions of salicylates. Winthrop Chemical Co., New York (*Jour. A. M. A.*, July 2, 1921, page 41).

ARGYN.—A colloidal compound of silver oxid and serum albumin, containing from 25 to 30 per cent. of silver. The silver is in a form not readily ionizable. Argyn has the actions and uses of silver protein preparations of the argyrol type (see New and Nonofficial Remedies, 1921, p. 330). It is employed in from 10 to 25 per cent. or stronger "solutions" (colloidal suspension). The Abbott Laboratories, Chicago, Ill.

CASEIN.—Caseinas.—The protein separated from milk by the action of acids or enzymes and purified. It contains not less than 15 per cent. of nitrogen, calculated on the moisture free material. Casein is used as a food, being added to other ingredients of the diet when it is desired to increase the content of the protein in the diet. This occurs occasionally in the feeding of infants, in the nutrition of adult convalescents and undernourished persons, and in the dietotherapy of diabetes. Casein is also used in the preparation of special foods for diabetics or others for whom a regimen poor in carbohydrate and fat may be desired. When incinerated, casein should not yield more than 2 per cent. of ash. It

should contain not more than 10 per cent. of moisture and not more than 1 per cent. of fat.

PAPAVERINE SULPHATE TABLETS—ROCHE.—Each tablet contains 0.04 gm. papaverine sulphate-Roche (see New and Nonofficial Remedies, 1921, p. 211). Hoffmann LaRoche Chemical Works, New York (*Jour. A. M. A.*, July 23, 1921, page 287).

PROPAGANDA FOR REFORM

OXYL-IODIDE NOT ADMITTED TO N. N. R.—Oxyl-Iodide (Eli Lilly and Co.) is said to be the hydro-iodid of cinchophen, and the claim is made that it exerts the effects of cinchophen and of iodid. Because of inquiries which had been received, the Council on Pharmacy and Chemistry decided to determine the eligibility of Oxyl-Iodide for New and Nonofficial Remedies. Dr. P. J. Hanzlik—formerly associate professor of pharmacology at Western Reserve University School of Medicine—now professor of pharmacology at Leland Stanwood Junior University Medical School, who has made a study of cinchophen and of salicylates, was asked to report on the therapeutic value and the rationality of Oxyl-Iodide. In his report Dr. Hanzlik brought out that the administration of Oxyl-Iodide can have no advantage over the administration of cinchophen and iodid, that in most cases in which cinchophen is indicated iodide is not wanted, and that when the action of both iodid and cinchophen is desired this can be better obtained by the administration of cinchophen and sodium iodide since it permits the proper regulation of the dose of each. After considering Dr. Hanzlik's report, the Council declared Oxyl-Iodide inadmissible to New and Nonofficial Remedies because it is an irrational combination marketed under claims that are unproved and consequently unwarranted (*Jour. A. M. A.*, July 2, 1921, p. 57).

A NUXATED VICTORY.—It was Nuxated Iron that enabled Mr. Jess Willard to wrest the championship from Mr. Jack Johnson, and the same marvel made it possible for Mr. William Harrison Dempsey in turn to administer the K. O. to Mr. Willard. It was inevitable, therefore, that the French champion should be defeated by Dempsey in the recent fight. And now newspaper advertisements describe how "Nuxated Iron" helped "Jack" Dempsey to whip Carpentier. One wonders what would have happened had Dempsey taken the "Nuxated Iron" course previous to our entrance into the World War (*Jour. A. M. A.*, July 9, 1921, p. 130).

QUASSIA COMPOUND TABLETS.—These tablets, marketed by Flint, Eaton and Co., according to the label on the trade package submitted to the Council on Pharmacy and Chemistry, contain in each tablet: Quassia 3-4 grain, chionanthus 1 grain, wahoo 3-4 grain, nux vomica 1-2 grain, cascara 1-3 grain, aloin 1-4 grain, ipecac 1-6 grain, podophyllin 1-4 grain, gingerine q. s. In the advertising "cascara" is replaced by the indefinite term "carcarin" and the "gingerine q. s." by "carminative antigrripe q. s." Flint, Eaton and Co. informed the Council that "carminative antigrripe" is sodium sulphite. The tablets were treated with dilute hydrochloric acid and the odor of sulphur dioxid became apparent. This shows that the company's statement to the Council that the tablets contain sodium sulphite is correct and that the formula on the label is incorrect. The Council declared Quassia Compound Tablets (Flint, Eaton and Co.) inadmissible to New and Nonofficial Remedies because: 1. They contain drugs of unproved value. 2. Their composition is needlessly complex, and therefore irrational. 3. Unwarranted therapeutic claims are made for them.

4. The name is misleading and not descriptive of their composition. 5. The statement of their composition is indefinite and incorrect. (*Jour. A. M. A.*, July 9, 1921, p. 141).

CHAULMOOGRA OIL IN LEPROSY.—There remains little doubt that a potent remedial agent for leprosy resides in some of the fatty acids that can be separated from chaulmoogra oil. The first larger group of successful cases were treated with the mixed ethyl esters of chaulmoogra oil acids carrying 2 per cent. of iodine in chemical combination. Intramuscular injections were supplemented by oral administration of a similar product. In later series the iodine was omitted without noteworthy difference in the favorable outcome of the treatment, and the oral administration has been discontinued because it gave no added advantage with respect to the results obtained. Two definite constituents of chaulmoogra oil—chaulmoogric acid and hydnocarpic acid—have been separated and employed in the form of esters therapeutically with obvious success (*Jour. A. M. A.*, July 23, 1921, p. 292).

SPIROCID AND THE INHALATION TREATMENT OF SYPHILIS.—Dr. H. N. Cole criticizes the claims made for Spirocid by the Spirocid Corporation. He points out that the inhalation treatment is not new but has been used since 1506 and has been given up by almost every trained syphilographer for many years because of the fact that it is not only irritating to the lungs but also dangerous and of uncertain dosage. Dr. Cole also comments on a card sent out by the Spirocid Corporation which shows a blood smear from a syphilitic patient containing spirochaeta pallida and spirochaeta refringens in rather larger numbers in comparison with the number of red cells shown. He states that it is a well-known fact that even in secondary syphilis it is almost impossible to find spirochaeta pallida in the blood smears. In his many years of work with syphilis he has yet to see the blood smear from a case of secondary syphilis in which spirochaeta pallida were found and, he adds, why in such an occasion spirochaeta refringens should be seen only the Spirocid Corporation can explain (*Jour. A. M. A.*, July 30, 1921, p. 394).

PROCAIN DERMATITIS.—Dermatitis following the use of procain has been reported. The treatment is palliative and includes removal of the etiologic factor (*Jour. A. M. A.*, July 30, 1921, p. 395).

IRON AND ARSENIC IN ANEMIA.—In an elaborate research at the George William Hooper Foundation for Medical Research in the University of California Medical School, the possible influence of iron salts and other substances supposedly stimulating regeneration of hemoglobin has been studied under carefully controlled conditions of feeding. The results show that iron in the form of Bland's pills is inert when given under controlled conditions in anemia periods under the conditions of the experiments. Ferric citrate and the organic "ovoferriin" gave no better results. Hemoglobin gave somewhat better results, but this effect need not be attributed to the iron in hemoglobin. Arsenic in the form of sodium cacodylate and as solution of potassium arsenite were also found inert. No drug tested compared with suitable dietary factors in securing a rapid regeneration of hemoglobin during anemia periods induced by simple hemorrhage. The results of this investigation give no support to the time honored custom of administering iron in simple anemia. The burden of proof for the value of iron salts (and of arsenic) in anemia now rests with those who claim that a given drug is potent in such conditions (*Jour. A. M. A.*, July 30, 1921, p. 379).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies
Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., NOVEMBER, 1921.

NUMBER 11

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3529 Pine St., St. Louis, Mo.

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ORIGINAL ARTICLES

DUODENAL ULCER*

H. K. WALLACE, M.D.

ST. JOSEPH, MO.

Pathologically, duodenal ulcer is a chronic inflammatory process characterized by a slow destruction of the mucosa and muscularis and its replacement by fibrous tissue with gradual contraction and scar formation, eventually producing a stricture of the duodenum, more or less complete, depending upon the size and duration of the ulcer. Microscopically, we have a central area of necrosis surrounded by a round cell infiltration and outside this an area of fibrous tissue formation. The usual site of the ulcer is on the anterior wall in the first part of the duodenum. Occasionally they are found in the second and third and even in the fourth part of the duodenum. The process begins probably as an end arteritis in one of the terminal arteries in the duodenum, either as an infectious or toxic process; the intima of the artery proliferates and there is a round cell infiltration. This cuts off the blood supply and a slow necrosis beginning first in the mucous membrane which being devitalized by its reduced blood supply is quickly digested by the gastric juices. If the artery which is plugged is large, destruction goes on more rapidly than repair and we have an acute perforation; however, as is more often the case the artery is small and repair more than keeps ahead of the destruction and we have the gradual scar formation and a typical chronic ulcer with obstructive symptoms, gradually becoming more pronounced as time goes on. Deaver has pointed out the association of a chronic appendix in practically all duodenal ulcers and considers the chronically diseased appendix as the seat of the primary focal infection from which the ulcer results.

Diagnosis.—The diagnosis as a rule is easy, and as Moynihan has said can be made over the telephone with never having seen the patient. In the diagnosis the history is by far the most important factor, and in my experience is more dependable than the X-ray. First in importance is the chronicity, usually the history of "indigestion" dating back for from three to ten years or more. Next the periodicity, these periods of indigestion and pain very often coming on in the spring and fall, lasting for a few weeks or months, followed by periods of complete relief from a few months to even a year or more, but always with a recurrence of the indigestion and pain, and each attack becoming more and more prolonged till it becomes constant. Exposure to cold and wet seems to be a very important factor in bringing on an attack and a great many of the cases will date the beginning of each attack to some exposure. Next in importance is the type and time of the pain, which is usually described as deep boring or burning pain located in the epigastrium, not radiating and relieved by food and alkalies, the pain coming on from one to three hours after meals and in the middle of the night. The sooner the pain after the meal the closer is the ulcer to the pylorus and its situation can often be definitely located by this means before the operation. Vomiting is a symptom, not of the ulcer, but a pyloric obstruction and occurs only in cases of long standing. Vomitus may or may not contain blood. Hemoptysis is not a symptom but a late complication (Moynihan), and occurs only when a vessel is eroded by the ulcer. Next in importance to the history is the X-ray, this of course should always be used when possible, but should be considered in conjunction with the history and not as an absolute diagnostic test. A negative X-ray in a suspected ulcer is no more conclusive than a negative Wassermann in a suspected syphilitic, and should bear no more weight in the diagnosis. Physical examination and laboratory tests, as blood counts, urine and

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

feces examination and test meals are of little value. The older textbooks all give a high free HCl, and total acid as a very important finding in ulcer. This is only the case (and then not very constant) in the more acute ulcers of only short standing and at this stage very few ulcers come to the surgeon. In the older ulcers the acidity is more often low and it is not uncommon to find the free HCl entirely absent. Occult blood in the stools is usually present, but this can be caused by so many other conditions that it is not dependable.

Treatment.—The medical treatment I mention only to condemn. Mayo has very aptly put it, a man must have nine medical cures before he comes to the surgeon for a permanent cure.

Can we expect to cure or remove a scar from the duodenum any more readily by alkalies, diet, starvation, duodenal tubes and such, than we can remove them from the skin or anywhere else, and wherever there is an ulceration there is bound to be a scar, and does not the scar cause just as many and severe symptoms as do the ulcers themselves?

Surgically, these cases are treated: (1) Simple gastroenterostomy; (2) Excision of ulcer and pyloroplasty; (3) Excision of ulcer and posterior gastroenterostomy; (4) Pylorotomy and gastroenterostomy.

All these proceedings have their field depending upon the size, site, and chronicity of the ulcer. Simple gastroenterostomy should be done only when there is a marked pyloric obstruction with a healed ulcer. It is the enthusiasm of some operators to do gastroenterostomy in cases of some extra-gastric lesion without a demonstrable ulcer and obstruction, and in other cases of active ulceration without excision of the ulcer that have recently gotten gastroenterostomy into such disrepute. The operative procedure in cases of duodenal ulcer should be very carefully selected, depending upon the pathology existing. Simple excision of the ulcer with or without pyloroplasty should only be done in case of acute ulcer of only short duration and with no fibrous tissue formation and contraction. Roeder² has advocated this operation in a recent publication, and reports good results in this type of case.

Excision of the ulcer and gastroenterostomy is to my mind by far the most satisfactory and the most surgical procedure. The pathology is removed and an adequate stoma is provided.

These cases where the ulcer is low down in the duodenum close to the Ampulle of Vater or near the head of the pancreas, the safest and easiest procedure is to invaginate the ulcer and do a post-gastroenterostomy. In those

cases of a large indurated pyloric ulcer with a possibility of malignancy, pylorectomy is the method of choice. In every case the appendix should be removed as a possible point of focal infection.

In 32 cases of duodenal ulcer operated on in the past five years there were 28 chronic ulcers and 4 acute perforated ulcers; in 16, the ulcer has been excised or invaginated and a gastroenterostomy done; 2 simple excision of the ulcer (perforated cases) and 11 simple gastroenterostomy done. There has been one death (a case of an acute perforated ulcer in which closure of the perforation and gastroenterostomy was done). In the cases in which the ulcer was excised and gastroenterostomy done, ranging from 3 months to 4 years there has been no recurrence of digestive trouble, except in one case which one year later had a perforated gastric ulcer, operated and recovered and now one and one-half years from the second operation is well. Of the simple gastroenterostomies, one case six months after the operation had a profuse gastric hemorrhage from which he recovered and now one year later has had no further trouble. Another, operated ten months ago has had several attacks of vomiting, large amounts of clear, bile-stained fluid and refuses a second operation.

Conclusions.—1. Duodenal ulcer is in the vast majority of cases, if not all, a surgical and not a medical condition.

2. The type of operation depends entirely upon the pathology found.

3. The appendix should be removed routinely.

4. The best results are to be gotten by excision of the ulcer and gastroenterostomy.

DISCUSSION

DR. LOGAN CLENDENING, KANSAS CITY: The Doctor has not said what happens to these patients some time after the gastroenterostomy is done. I have had some little experience and have found rather interesting conditions; some not usually described as such in the literature, and some that are usually described not present. For instance, Dr. Wallace mentioned a case where he supposed the symptoms were due to a vicious circle. I have examined thirty-six patients after gastroenterostomies and I have never seen what I suppose is meant by a "vicious circle," that is, the food going out through the pylorus and coming back through the stoma. Those things are described in text-books, but you do not see them in patients. The symptoms following gastroenterostomy are usually due to other causes. The two principal kinds of symptoms are cases in which you have too large a stoma or the stoma is implanted too high, and there is a residue in the stomach itself.

Another point was the possibility of symptoms coming after a gastroenterostomy which was done, but not in the presence of gastric disease. I have followed two patients who have developed other diseases which accounted for their gastric symptoms,

and in which no gastric disease was found in a secondary operation, who have had gastroenterostomies for several years before their second operation. So far as I was able to tell by studying the patients as a clinical whole, and with the X-ray and gastric analysis the gastroenterostomy did do them no harm. In a great many instances of that kind I suppose the stoma does not do much work of the stomach as an exit.

In the cases of duodenal ulcer that I have seen with gastroenterostomy, I think it does good without excision of the ulcer, even when there is a high grade pyloric stenosis. When the acute situation is over and the pylorus has been opened, the food goes out through it again. Even if you have not a complete pyloric obstruction I think the gastroenterostomy does good.

DR. CHAS. H. WALLACE, ST. JOSEPH: I have had rather an extensive experience of twenty-five years in dealing with duodenal ulcers both from a medical and a surgical standpoint. In my earlier practice, before operative procedures were much in vogue, I treated these cases like the average surgeon did—medically. I "cured" them time after time, and some of them were in later years operated on and permanently cured.

I am satisfied the position the essayist takes, that duodenal ulcer is a surgical condition, is well grounded. The younger internists who have been trained in recent years, and who had both a medical and surgical hospital service, and have followed these cases in the medical wards and then to the operating table and have seen the pathology are all ready to say these are surgical conditions largely, and not medical. For that reason, I believe these cases now should be studied by the internist and surgeon together, and when a satisfactory diagnosis of ulcer is made and operation done, the case is then turned back to the internist for post-operative management. They should work hand in hand in this matter. The time will come—although it has not yet arrived in my opinion—when duodenal ulcer will be recognized just as much a surgical disease as appendicitis is today. We do not find anybody today who says appendicitis is a medical disease, and in a few years I think we will not find men who will deny duodenal ulcer is a surgical disease.

With due regard to Dr. Sippy, I do not know but what his report has done harm rather than good. These cases have been treated and treated, and we as surgeons get the perforated cases. This is a hazard to a man. A perforated ulcer, unless gotten immediately, is fatal. When a diagnosis is made of chronic ulcer, I think they should have excision of the ulcer and gastroenterostomy as outlined by the essayist.

In regard to the vicious circle, all of us who years ago did anterior gastroenterostomies know that we got vicious circles in many cases. Dr. W. J. Mayo demonstrated this was faulty technique. He showed posterior gastroenterostomy was the proper operation from an anatomical standpoint. Now we seldom have a vicious circle. Where, for any reason a posterior gastroenterostomy cannot be done the anterior gastroenterostomy with an entero-enterostomy prevents a vicious circle.

DR. JOHN F. BINNIE, KANSAS CITY: I have enjoyed this paper we have just heard exceedingly. I have been glad to hear the discussion on it, especially in regard to the medical aspects of the treatment, because it gives one an opportunity to put one's self on record as being thoroughly in disagreement with what has been said by the gentleman who criticized the paper.

The condition of duodenal ulcer is very similar to the condition of an ulcer on the leg or any other place, except for the increased dangers from it, and

I am sure that everyone realizes that thorough surgical treatment of ulcers of the leg is distinctly in order.

The danger of ulcer of the duodenum is in my opinion not the danger of malignancy. That comes in connection with gastric ulcer. But it is the danger of perforation and slow obstruction ruining the health. For these conditions, only surgical operation is of value.

DR. H. K. WALLACE, ST. JOSEPH, closing: When I made that rather definite assertion as to surgery against medicine I thought I would get a rise, and I did. I rather expected to get a rise from the X-ray people, but maybe they are not here.

My paper said nothing about gastric ulcer. I was not trying to discuss gastric ulcer. The doctor who first discussed it talked more about gastric ulcer than duodenal ulcer; however, I am just as firmly a believer that gastric ulcer should be excised, from its danger as a malignancy. I do not think it is necessary to do a gastroenterostomy in the majority of gastric ulcers.

The internist said these ulcers were not easy to diagnose. Granted they are not, they are one of the easiest things we have to diagnose if we take a history. The histories in most of them are typical. Where there is a doubt and the case is operated, in nine out of ten cases you will find chronic gall-bladder or appendix or some other lesion, and not an ulcer. In 90 per cent. of your ulcers the history is typical. The internist, unfortunately, has only the autopsy table to confirm his diagnosis. The surgeon can confirm this by operation.

The X-ray ought to be done in every case. Every little bit of help we can get is that much more. The thing that made me bring up history versus X-ray was this: Recently I have operated on two cases of duodenal ulcer. Both had been X-rayed by the best men in the country with negative results. I excised a very definite ulcer. When you have an ulcer you can see and excise and keep, there is no doubt about its being an ulcer.

A gastroenterostomy relieves the symptoms, but there is a big majority of these cases—a few I have seen operated afterwards—and the ulcer is still there, although the symptoms are relieved. The case that had a large hemorrhage, the ulcer was still there. If it had been excised he would not have had this hemorrhage. There is no objection to excising them. It only takes a few minutes, particularly those around the pylorus.

As to the vicious circle, I did not want to raise any discussion about that. The patient had periodical attacks of vomiting. That is not a typical vicious circle, but I think the food is going through both the pylorus and gastroenterostomy opening. She ought to have an excision of her pylorus.

301 N. 8th Street.

ANALYSIS OF ONE HUNDRED CASES OF SPLANCHNOPTOSIS*

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AND

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ST. LOUIS

The profession generally does not appreciate the importance of ptosis of the abdominal

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

organs or the success of the treatment of this condition. It is hoped that this paper will stimulate renewed attention to this subject.

In literature many phases of this subject have been presented, usually the simple and obvious being overlooked and the search of complications to some obscure disease stressed. Many women have been subjected to abdominal operations for numerous ailments without relief. This type of patient would not have been condemned to a miserable existence with their conditions classified as hysteria or neurasthenia, had their abdominal ptosis been first considered and properly corrected. At the time the initial symptoms present themselves, it is oftentimes unnecessary to resort to operative procedures, as Roysing, Lane and others have recommended.

Early writers made the observation that many cases of nervous disorder (mainly hysterical or hypochondriacal individuals suffering with nervous oppression) simulating heart disease, phthisis, fibrosis, anemia, etc., were found to have a prolapsed condition especially of the transverse colon, the stomach, and the kidneys.

In Glenard's disease, usually known as splachnoptosis, floating kidney, hepatoptosis or splenoptosis, there is a tendency to intestinal adhesions, kinks, chronic constipation, intestinal catarrh, ulcers and strictures and prolapse of the female organs.

Our present study must be confined to the prolapsed stomach, kidneys or large bowel, with a possible consideration of prolapse of the genito-urinary organs. The usual signs of splachnoptosis are pendulous abdomen and a relaxed abdominal wall, although ptosis of the abdominal organs cannot be considered out of the question just because the abdomen is not protruding and its wall is not relaxed. Glenard's test, however, is applicable to either type of case.

The cause of the condition is often structural. In an ill-nourished individual the natural fat pads have been absorbed, hence their supportive action in the abdomen is absent. If the configuration of the lower chest and costal angle, the vertebral column, or the pelvis have slight structural anomalies, displacements of the abdominal or pelvic organs are likely to occur.

Symptoms and Diagnosis.—Epigastric pain, nausea, with or without vomiting, eructation of gas, extreme weakness, sense of fullness, discomfort and pressure after eating, emaciation, constipation, or diarrhea alternating with constipation, cardiac insufficiency and precordial pain, and pain in abdomen which is relieved by lying down or abdominal support.

Flatulence is the symptom probably most commonly complained of by sufferers from

gastro-enteroptosis. The patient is so firmly convinced that gas is the cause of his or her distress, that they sometimes succeed in misleading the physician. It is a fact that there are instances in which gas formation is excessive and where definite fermentative and putrefactive changes give rise to gaseous distention of the stomach and intestines. In the great majority of instances in which flatulence is complained of, there is no distention whatever as may be recognized by noting measurements and percussion from time to time over the abdomen.

Investigation shows that the real cause of trouble is not the excess of gas, but an excess of toxicity of the stomach or intestine with exaggerated peristalsis moving the gas from point to point, often accompanied by feelings of extreme tension and at times severe colic. The peristaltic unrest which occurs in the stomach has its analogue in the small and large intestines. It is true that this symptom frequently occurs when there is an irritable or inflamed intestinal mucosa, but it is equally true that it occurs and perhaps with even greater frequency when there is no special irritation of the mucosa, but where there is irritability of the sympathetic nervous system. It is an accepted fact that certain individuals when undergoing emotional stress at once experience abdominal symptoms and boborygmus. In such persons one may recognize the nervous disturbances from the audible rumbling in the intestine. From the foregoing it is then probable that in a very high percentage of such cases, the visceroptosis is an important factor as the results would indicate.

At times a diabetic or tabetic crisis is simulated. The former is easily ruled out by laboratory tests. If the tabetic gastric crisis is only simulated, the condition will be relieved by proper support of the prolapsed organs. If it is present as a complication there will be a recurrence even while the ptosis stands corrected.

In this study, the condition is found to be a rather common one, especially among the moderately well to do class of people, more often it is found among those patients of a nervous instability, with hysterical or hypochondriacal tendencies, those who have the leisure, and by temperament are inclined to be introspective and worry about themselves. The condition is more common in slightly built women during the late twenties regardless of their marital state, but the greatest number of cases is found in patients between thirty-five and forty years of age. (See table below.) The average weight in this series was 116 pounds.

Visceroptosis can be classified as uncomplicated and complicated cases. Of the first type

there are variations of a degree only, depending upon the number of abdominal organs displaced and the extent of the ptosis, as illustrated by the following photographs:

The following case, illustrated by Fig. 1, is quoted as typical for the whole group of cases:

B. L., white female, 27 years old, married, weight 105 pounds. Family history negative except that mother died with heart disease and dropsy. Past history: Measles, whooping cough, chicken pox, no complications. Menses began when 11 years old,

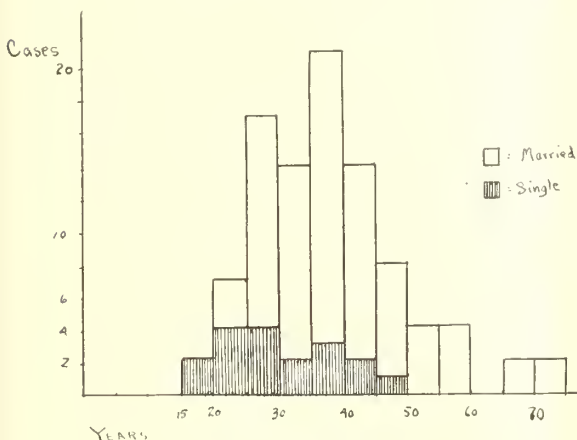


TABLE OF INCIDENCE

Fig. 6.

dysmenorrhea three days previous to and during three day flow, irregular, every fourteen to thirty-five days. No history of otitis media, denies tonsillitis, catches cold easily. Urinary frequency, six times during day, three times during night with urgency. Palpitation for two years, no edema, no cough or pains in chest, no night sweats. Has been married seven years, no pregnancies. Patient has been doing light housework, drinks six cups of coffee daily, appetite good, bowels constipated for the past three years and rarely move except on purgation. Almost constant nausea with vertigo, no vomiting. Heart beats rapidly at times. Present illness: Entered hospital April 14th, 1920. Temperature, 98.6; pulse, 80; respiration, 20, and blood pressure, 115-70. Complaints of pain left side, a dragging sensation and heavy feeling lower abdomen, together with constipation, nausea, dizziness, vertigo and nervousness. Examination showed a slightly developed, poorly nourished white female, pupils reacted sluggishly to light and accommodation, nose was normal, no mastoid tenderness in ears, no discharge. Tongue was slightly coated, no tremor. Tonsils not enlarged or inflamed. Right and left systolic pulsations in neck at times, no lympho-adenopathy, thyroid was palpable. Chest was poorly developed, costal angle being very sharp, interspaces not retracted, mammary glands poorly developed, firm, nipples large. Examination of lungs showed vesicular breathing throughout, no rales, breath sounds and fremitus normal, no areas of dullness. Heart apex neither visible nor palpable, slight heaving in epigastrium, no thrills or hypertrophy, beat regular and forceful, no extra systoles, no valvular lesions. Complained of pain right umbilical region on palpation, a floating mass being found in this region which was

movable down as far as the appendiceal region. A somewhat tender mass in the left side just under the costal angle, very slightly movable. Vaginal walls normal, uterus slightly movable, retroflexed, adnexa not palpable, no discharge. T. A. reflexes exaggerated, no pathological toe signs or clonus, Romberg negative. Extremities well developed, no varicosities, contractures or deformities.

Laboratory: Urine pale yellow, sp. gr. 1.020, acid reaction, no albumin, sugar or casts, moderate amount pus cells and vaginal epithelium. Blood showed: Hemoglobin 90 per cent., white cells 12,000, polymorphs 82 per cent., small lymphocytes 14 per cent., large lymphocytes 4 per cent., no eosinophiles or basophiles, red cells 4,000,000. Wassermann test negative.

Patient had a few hysterical attacks of nervousness. After a month of rest in bed, catharsis and sedatives, and proper support of abdomen with adhesive strips, patient was discharged with instructions for the proper fitting of a front-lace corset which would give the desired support. Weight when discharged was 110 pounds.

During nine and a half months following discharge, patient was entirely free from symptoms and gained 8 pounds. February 12th, 1921, became tired of wearing corset and discarded it, when symptoms gradually returned and increased in severity until patient again applied at hospital for treatment on April 26th, 1921, complaining of nervous spells, and unsettled feeling at which times her heart beat rapidly, pains in the left upper quadrant of abdomen, nausea and vomiting at irregular times, not related to meals. Examination at this time showed temperature, 98.4; pulse, 80; respiration, 20, and blood pressure, 115-70. Abdomen flat in decubitus position, sigmoid palpable, a tender mass palpable in the right lower quadrant resembling spastic colon, also tender right kidney which was almost entirely palpable, tender on pressure, no rigidity or spasm. Otherwise no change in physical findings. Cystoscopic examination showed no abnormality of bladder. Roentgenographic examination showed no abnormality of chest, stomach showed itself to be of atonic type, probably normal for the individual, the lowest border of the lesser curvature more than a hand's breadth below the umbilicus, practically in the pelvis.

April 27th urine showed: Alkaline reaction, sp. gr., 1.018; no albumin or casts, a few white blood cells, epithelium and phosphates. Blood showed: Hemoglobin, 70 per cent.; red blood cells, 4,000,000; white blood cells, 6,000; polymorphs, 76 per cent.; small lymphocytes, 19 per cent.; large lymphocytes, 3 per cent.; eosinophiles, 2 per cent.

After two weeks of rest in bed and elimination, patient was discharged, abdomen supported and free from symptoms, weighing 118 pounds.

In this series, a visceroptotic condition of greater or less degree was demonstrated in 99 per cent. of the cases. They presented the usual symptoms of epigastric pain, nausea with or without vomiting, eructation of gas, sense of fullness after eating, constipation, flatulency and malaise with loss of appetite. Sixty-one per cent. showed some degree of gastric dilatation. Hypo- or hypermotility, visible peristalsis or pyloric spasm were not constantly present. The stomach was uniformly of the long vertical type, the lesser curvature below the umbilicus, the body at times lying completely within the pelvis.

The next most commonly affected organ was



Fig. 1. Ptosis, first degree.
Lateral view.



Fig. 2. Ptosis of second degree.
Lateral view.



Fig. 3. Ptosis of third degree.
Lateral view.



Fig. 4. Ptosis of fourth degree.
Lateral view.



Fig. 5.

the kidney. The right kidney was found displaced usually in the right iliac region (38 per cent.) and freely movable, palpable in 60 per cent. of the cases. The left was only freely movable in 1 per cent. but palpable in 8 per cent. Both kidneys were palpable in 7 per cent. To digress for a moment, a word may be said concerning palpation: It is suggested not to dig in the abdomen as if one were kneading bread as that pushes any masses or organs from the examiner, but by gently placing the hands on the abdomen at the umbilical level and pushing upwards, a kidney, liver or spleen will be more successfully palpated.

Next, the liver was found palpable in 23 per cent. of the cases; in 25 per cent. there was found a slight tenderness in the gall-bladder region.

The spleen was found in the prolapsed state only in one case.

The most common complication is, as to be expected, some affection of the reproductive organs. Eighty-five per cent. of these cases were affected in this way. Twenty-three per cent. had been operated upon, either as laparotomy for exploration, or for correction of a suspected gynecological condition and were not relieved from symptoms. Three per cent. had been relieved.

The next most commonly associated condition was that of history of chronic appendicitis in 47 per cent. of the series, 22 per cent. of which had been operated upon without relief from symptoms.

Treatment.—Much discussion has arisen as to the treatment of visceroptosis. The first rational method of relief consists of raising and

supporting the abdomen. For this end many methods have been tried, e. g., (1) Strapping of the abdomen with adhesive bands, with the patient in the decubitus position, throwing the organs upward and backwards to a correct position. (2) The wearing of a supportive bandage of which many types are available but few are properly useful.

The method of treatment in these cases was as follows: Correction of abdominal position by a front-lace corset (Gossard). The lower portion should fit over the true pelvis snugly. At the waist and above the corset should be loose to allow proper functioning of the abdominal musculature and then the natural position of the abdominal wall is encouraged. In those cases where a movable kidney is encountered, it is necessary to apply a pad.

That abdominal support is the most necessary measure to be taken is undoubtedly correct. In conjunction with this any fault of posture should be examined for, and any curvatures of the spine, round shoulders, fallen arches, etc., should receive immediate and consistent corrective treatment.

The diet should be carefully considered, the dietetic needs of the patient studied and any errors corrected. The chronic constipation which usually is present will usually respond to corrective dietetic measures. The diet should be considered throughout the course of treatment and changed as the patient's condition indicates.

Exercise is another important feature of the treatment. (1) Such general exercises as walking, riding, golf, swimming, etc., should be recommended to build up the general bodily

health, graded to suit the particular physical condition of each patient. (2) Specific arm, leg and trunk exercises which will strengthen the abdominal muscles.

Psychotherapy is usually neglected. The patient should be taught to use the costal type of respiration. The worrying over their condition and the accompanying nervousness often disappears magically when treated with auto-suggestion.

In severe cases a rest cure is indicated. The bed should be elevated slightly at the foot. Abdominal massage should be given to strengthen the muscles and improve their tone. The general weakness incident to lying in bed is usually offset by a simple forced nutritious diet. This will also tend to replace the natural fat pads of the abdomen so necessary to proper visceral support.

When in rare cases the symptoms are so severe and distressing that they do not respond to the combined measures above, then and then only is surgical interference warranted.

An exploratory laparotomy will show what anatomical corrections seem imperative. This correction combined with faithful adherence to the non-surgical measures should afford the patient complete relief.

Surgical treatment, including gastropexy, resection, appendectomy, etc., had not been satisfactory, affording no permanent relief in 45 per cent. Simple non-surgical treatment, consisting of a properly applied abdominal support, diet, etc., together with proper treatment for any other coincident condition of the teeth, sinuses, respiratory or circulatory system, etc., will usually give relief to symptoms.

In this series 18 per cent. were not relieved, of which 4 per cent. were operated without result; 80 per cent. were relieved. Of these the relief was only temporary in 9 per cent., i. e., under 3 months. In 64 per cent. there was marked lasting improvement, gain in weight, etc. Of this class the importance of this improvement cannot be overestimated because it gives such a subsidence of symptoms. Should an abscess, infection, or unrecognized condition be present, it is then no longer masked by a multitude of conflicting symptoms presented by a somewhat overwrought patient, but on the other hand stands out in relatively bold relief as a separate and distinct condition, thenceforth treated as such.

SUMMARY

1. Avoidance of unnecessary operations which do not afford relief.
2. Abdominal support, diet and exercise.
3. Stabilization of nervous system.
4. Proper elimination with stimulation as indicated.

5. Aid in diagnosis of any associated condition.

6. Only resort to surgery after thorough trial of other methods and a definite period of observation.

DISCUSSION

DR. RALPH W. HOLBROOK, KANSAS CITY: Dr. Schisler has covered the subject, but I wish to take issue in regard to the treatment as concerns abdominal massage and the question of exercise. I think when exercising too vigorously, they come back earlier and present more symptoms than any other type of case. I believe abdominal massage applied by an inexperienced individual who thinks massage is digging is a bad thing. There is no question about pelvic congestion. If they are put prone and the hips elevated and alternating hot and cold packs applied—a Turkish towel folded, first out of hot water and then cold—twice daily for three weeks, it leaves the patient not depressed as does exercise of any degree.

DR. SCHISLER, ST. LOUIS, closing: Dr. Holbrook's point was very well taken. The symptoms usually are enlargement of the abdominal viscera with general atony and dilatation. About one-half hour's rest after meals is always recommended. The abdominal massage with appropriate exercises as suggested by Dr. Duke are most excellent and I wish again to lay special stress on the importance of a more careful study of this class of cases before surgical means are applied.

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THE CAUSES OF DISEASE*

MONTROSE T. BURROWS, M.D.

ST. LOUIS

The subject under discussion today is one in which I am sure all of you are most vitally interested because one's success in this world depends wholly, after all, on one's ability to keep well. This is the reason why the physician is tolerated in the community. The older physician whose knowledge was very limited had little to make public. He was compelled to do the best he could. His methods were largely Christian Science. He sympathized and encouraged. The great mass of diseases had to be treated symptomatically.

Modern developments have brought to light the necessity of other methods. Unless everybody now is more or less definitely equipped with knowledge it is impossible for the physician to combat the diseases about him. Modern medicine deals with prevention as it deals with cure. Prevention demands the concerted action of the community.

For this reason, if for no other, modern medicine must be more widely taught. If prevention demands the concerted action of the community, then the community must be taught, for no man can be expected to do what he knows nothing about.

*Public Lecture Delivered at Washington University School of Medicine, Sunday Afternoon, January 16, 1921.

A physician recently complained at a medical society about the disregard shown by the city government to cut or to compel to be cut the weeds in certain vacant lots. The question that arose in my mind was, would they not be cut if the physician made clear such a necessity. I am glad the dean of the medical school and other members of the faculty have established this series of lectures, and I am proud to have been chosen to give one of them in spite of the embarrassment which the difficulty of the subject chosen presents to me.

The subject, "The Causes of Disease," is a large one and in a single lecture it is impossible to give more than a brief outline of a few diseases. Before undertaking the study of these diseases, it seems imperative, however, that I first make clear what is meant by disease when it is treated as a whole. I think I can do this in a single sentence: It is anything that incapacitates the individual. If a man breaks his leg, he has suffered disease. Again if a man sneezes continually, he is incapacitated. And so we might enumerate a large number of such changes from the normal, all of which are familiar to you.

The cause of the broken leg is external injury of some sort or another. The cause of the sneezing may be bacterial infection, it may be pollen from weeds, this latter we know as "hay fever." It may be due to the odor of horses or cattle, dust of various kinds or a number of other things.

In enumerating the causes of disease it is evident, therefore, that anything external to you may be responsible. The causes may be mechanical or chemical; they may be heat or cold, an electrical shock, etc. Again, they may be due to bacteria. Among these are the acute infectious diseases, such as typhoid fever, scarlet fever, measles, yellow fever, smallpox, infantile paralysis, tuberculosis and a host of others. They may also be due to worms and other animal parasites, and again, to food and drink. Leaving aside alcohol and poisons which may come from putrid food, there are many individuals who cannot eat beef, others who cannot eat eggs, or wheat, or various kinds of berries, etc.

This relation of common articles of diet to definite and often the severest types of disease is the result of the most recent medical investigation, and without a doubt forms one of the greatest advances in modern medicine.

In the lecture today I shall spend very little time in discussing diseases which are caused by mechanical injury, such as breaking of legs, nor will I spend time telling you of the diseases caused by the taking of poisons. All of you know that putrid food is a poison and you know how to defend yourself against a

rapidly moving automobile. If not, we will leave that to the "Safety First Committee." We shall confine ourselves rather to those diseases which come upon us out of a clear sky, so to speak, or those which the cause is a minute bacterium or a parasite or is something that we would ordinarily regard as harmless.

Among these are the acute infectious diseases, such as scarlet fever, whooping cough, measles, typhoid, tuberculosis, infantile paralysis, etc. All of these are caused directly by bacteria, which are as all of you know minute organisms.

Along with these I shall also discuss such diseases as asthma, hives, eczemas and hay fever, which we now know are often caused by ordinary foods and flowers.

The last set to be described will be the more obscure diseases as far as their causes are concerned, such as cancer and the various tumors. Although we know nothing definite as yet as to the causes of these conditions, some few facts have been learned which may be of interest to you.

Before taking up the discussion of these diseases, it may be of interest, however, to point out first one peculiarity of the relation of the disease to its cause, which hold at least in those diseases the cause of which is known.

That peculiarity is this: What is the cause for disease in one individual may not be the cause for the same set of symptoms in another. The infectious diseases caused by bacteria such as typhoid fever is the result of an attack of a myriad of small organisms, bacteria, capable of multiplication in the body of a man. Suppose a big fellow jumps on a little fellow; the little fellow may end up with a bloody nose, but suppose this big fellow jumps on a big man, this bully may get the worst of it.

We do not know all about this peculiarity of the means of the greater resistance one man may have in warding off the attack of bacteria than the other, but we do know that in the same way as men vary in this regard so the bacteria also vary in their ability to attack. Bacteria growing in a man dying of the disease which they cause have a greater punch so to speak than those which have blown about the street or have suffered other surroundings abnormal to them.

In the case of a number of the so-called acute infectious diseases, such a resistance is acquired by any individual having had one attack of the disease. Such is true of measles, whooping cough, mumps, typhoid fever, smallpox, scarlet fever and infantile paralysis. Rarely does one ever suffer a second attack of these diseases. This is not true, however, of diphtheria and a number of other

acute infectious diseases. A person suffering from diphtheria need not fear another attack at once, but after a few years this may occur. The resistance gained in the first attack becomes lost again.

Diphtheria.—Diphtheria is a disease caused by a minute bacterium which has a rod-like form with peculiar small bodies near one or both ends of the rods. These bodies are brought out by staining the killed bacteria with certain dye. Such peculiarities aid in their recognition as do their ability to grow outside the body in certain substances in which other bacteria will not grow or do not grow so readily. These bacteria do not invade the body, but grow in the throats of individuals infected. During this growth they may be passed to other individuals. In their growth they kill the surface lining of the throat and this dead lining appears as a white sluff. During these changes a poison is produced by them which is taken up by the blood. It causes the fever, the paralysis, and the destruction of the heart and other organs.

As soon as this poison gains entrance into the blood, the body reacts to produce another substance which tends to destroy or make harmless this poison. If the poison is produced slowly enough, the man destroys it all and becomes well and the bacteria cease to kill the surface lining of the throat. If the poison is produced by the bacteria faster than the substance which destroys it is produced by the infected individual, the one afflicted succumbs to the disease.

Not only man may form a substance capable of neutralizing or removing the poison formed by the diphtheria bacillus, but other animals also form these substances in their blood when the poison from the diphtheria is introduced into it. The diphtheria bacillus may form the poison when it is grown in bouillon in a flask. The bacteria may be filtered out and the poison introduced into a horse. A small amount will not injure him. If this be given for a long time with increasing amounts the horse's blood will contain eventually very large quantities of this neutralizing substance. This is known as "antitoxin."

If a small quantity of this horse's blood or the fluid part of it after clotting, the serum, be introduced into an individual sick with diphtheria it will neutralize the poison which causes the disease.

Although true the diphtheria bacillus will grow in many substances outside the body it is questionable whether in many places such suitable substances are found by it in nature. On the other hand it has become evident that there are individuals who are so resistant to the poison that when infected they do not become ill of the disease, but in spite of this

fact they allow the bacteria to grow in their saliva and the secretions of their throats. These bacteria do no harm to them, but in other individuals they will produce the disease. Such carriers of these bacteria form a constant menace, therefore, to other individuals who are more susceptible. If we come in close contact with these individuals or secretions from them we become infected.

Schick, several years ago, induced a method by which it is possible to determine whether one is resistant or susceptible to this disease. He introduced small amounts of toxin into the skin and found that the place becomes red in individuals susceptible, while no change takes place in those which are resistant. Other blood tests have recently been developed by us here at Washington University.

Mainly through the energies of Doctor Park of New York we now also have a method by which it is possible to raise the resistance of individuals and prevent their becoming sick. The giving of antitoxin to healthy individuals has little effect. It disappears quickly and in a few days the individual is as susceptible as ever. Park has shown, however, that if the poison itself neutralized with antitoxin is introduced, the immunity is more lasting. An individual so vaccinated may thus ward off the attack when he may be infected.

The careful study of the use of antitoxin has shown conclusively that diphtheria is a disease that can be cured. This cure cannot be made, however, unless plenty of antitoxin is available and it is used early. To make an early diagnosis in diphtheria, a culture of the throat must be made. Such culture methods and the necessary antitoxin is expensive. Many poorer families cannot afford it.

In many of the larger eastern cities death from diphtheria has been reduced to almost nothing. Carriers have been found and their throats cleansed, children in schools have been tested and many have been vaccinated. The city provides free culture media and antitoxin for the poor. This is left at every drug store, the cultures are collected daily and a report is given by the city bacteriologist within twenty-four hours.

It seems to me that you as citizens of St. Louis and Missouri should know these facts and look to see if our communities are amply cared for.

Lockjaw.—Another bacterium having many of the properties of the diphtheria bacillus, but differing in many of its other characteristics, is that causing lockjaw. This organism does not invade the body, but grows in the dead tissues of wounds. There it produces a poison which invades and causes the symptoms peculiar to this disease, the stiff jaw, the general rigidity, convulsions and death. Like the

diphtheria bacillus these bacteria produce a toxin or poison when grown in a flask outside the body. It is the same poison which causes the symptoms of the disease. An antitoxin may be developed in horses by injecting this toxin. It is interesting, however, that serum taken from these horses rarely cures when given to a patient suffering with lockjaw, while if it be given previous to the attack when the wound has been inflicted, lockjaw will never develop.

In the case of diphtheria, the poison enters the blood and may be easily removed by the antitoxin. In lockjaw, the poison does not enter the blood, but travels from the wounds to the nerves and then to the brain. The antitoxin cannot thus easily reach it when it is injected into the blood.

The bacterium of lockjaw is known as the bacillus tetanus. It is a rod shaped organism with a thickened end. It is minute, but larger than the diphtheria bacillus. This organism lives normally in the intestines of horses and some other domestic animals. When cast out on the ground it does not die, but forms spores or goes into an encysted state in which it may live for years.

One must always be fearful of lockjaw when suffering from any wound where the object inflicting it has come in contact with horses or horse manure. Lawns are often fertilized with manure, and when they are, the tetanus bacillus may be found there even after years.

Tetanus or lockjaw is very infrequent among iron workers, but very common among soldiers, farmers, stable hands, gardeners, and in individuals injured on the street or in alleyways, etc. Such individuals when suffering from dirty deep puncture wounds should be given antitoxin at once.

Smallpox.—The cause of smallpox is as yet unknown, as is also true of measles and scarlet fever. That smallpox is due to an organism which is able to multiply is strongly suggested however by its course. It is epidemic. The disease is acquired through contact with another individual sick of the disease or contact with clothing or infected material from such patients.

It was interesting, however, that as far back as the 18th century Jenner noted that milkmaids did not suffer from smallpox, or, if sick, readily recovered. It was known that cattle suffered a similar disease, known as cowpox. Individuals working with cattle often became infected with this cowpox which amounted to little more than a local sore. It was these individuals which Jenner found recovered readily or did not acquire smallpox. Jenner thus induced the modern method of vaccination which together with isolation of

individuals sick with the disease has practically rid it from the world.

As it has developed, cowpox is evidently smallpox in cattle. The casual agent growing in cattle has lost its punch, so to speak, for human beings, but when this is given to a man the man suffers a mild form of smallpox. As noted above, one attack of smallpox shields one from further attacks, so this mild form shields one from other attacks of the severer form of the disease acquired from man.

Unfortunately similar methods have not been found for measles and scarlet fever. No trace of the cause of these diseases has been definitely found and again they are not transmissible to animals in a form convenient for study.

Typhoid Fever.—Typhoid fever is caused by a short bacillus closely related, but different from the colon bacilli which is constantly found in the intestines of man. This organism is actively motile and grows readily in many foods, in milk, and may live in water for several days. It has been found in oysters feeding near an open sewer.

The idea that typhoid fever may live and propagate in water indefinitely is however probably erroneous. Undoubtedly the main source of typhoid bacilli are individuals who have suffered the disease. Many of these individuals harbor these bacteria in their kidneys, bladder, or in the gall-bladder, and give they off daily into the sewage, where they will live for several days. Such individuals have them frequently on their hands.

There are many such individuals in any community. If sewage come in contact with the water supply of a town, an epidemic will surely arise. For this reason the water supply of most cities is carefully guarded. In rapidly moving streams such as the Mississippi, such bacteria are soon destroyed. In fact, none can be found a few miles below an open sewer.

A city in New York State obtains its water from a stream. A workman sick with typhoid camped on this stream near the place where the water was taken into the mains. Over a thousand cases of typhoid fever developed in this town.

In Baltimore an epidemic broke out along a milk route of one of the dairies. Seventy-five cases developed. It was learned that the only change made by the dairy was an order to have the milk cans washed by hand instead of rinsing. One man did the work for each route. The man doing the work for this route was found to be a carrier of typhoid. He washed his hands, but in spite of this he introduced a few bacteria in many of the cans where they multiplied rapidly.

A large epidemic broke out in the East

among persons eating raw oysters from a bed growing at the mouth of a sewer.

A woman recovering from a gall-bladder operation gave a tea party on a summer afternoon. She was feeling well, but still had an open wound which she dressed herself. She made chicken sandwiches in the morning and served them to twelve guests in the afternoon. Eleven of these developed typhoid fever.

The typhoid bacillus growing in a man invades all parts of the body. They do not form a poison in the sense of the diphtheria bacillus. The way the disease is produced by them is not altogether clear. One attack of this disease shields however against another. Second attacks are probably due to one of two other bacteria closely related to the typhoid bacillus. These produce a similar disease. An attack of typhoid does not shield one against these.

It has been conceived that the inoculation of a mixture of dead typhoid bacilli and the bacilli of the other two closely allied diseases might produce a low form of these diseases and make the individual immune from all of them. This has been tried. The typhoid scourge of previous wars did not occur in this present war. These inoculations were undoubtedly most important in accomplishing this fact together with, of course, most rigid care in seeing to the destruction of the sewage and the cleanliness of the body and the food of the soldiers.

Infantile Paralysis.—The organism of infantile paralysis is still under discussion. In spite of this fact many of the habits and characteristics of this organism have been learned from a careful study of epidemics and methods of transmitting it to animals. In 1902, Lansteiner, of Vienna, made the first successful transmission of the disease from a child to a monkey. This work was soon confirmed by Strauss, and then by Flexner and Lewis, in this country, and Levaditti, in Paris. The principal work in this country has been done by Flexner and his co-workers at the Rockefeller Institute. It is now fully established that this organism will pass through a clay filter, the pores of which are so small that ordinary bacteria will not pass.

This observation led for a time to the belief that the organism was ultra-microscopic, but later Noguchi succeeded at the Rockefeller Institute in cultivating an organism which looks much like ordinary streptococcus except that it is much smaller. This organism will pass through a clay filter and produces in monkeys a disease like infantile paralysis.

This disease is interesting not only from this peculiarity of the organism forming it, but from other standpoints. In the first place it is probably a disease almost wholly peculiar

to man. Animals other than monkeys probably are not infected. The virus may live for a long time in the mouths of otherwise healthy individuals. The patients and the nurses of sick individuals are invariably carriers.

One attack suffices for the establishment of complete immunity. At least no definite evidence of any individual suffering a second attack has been recorded.

With it, like with all infectious diseases all individuals do not suffer the same. In fact, in the large epidemics in this country, I think we can safely say that only a few of those infected suffered any harmful effects. In Baltimore in 1916 I calculated that there were from 1,500 to 2,000 cases. Out of this number there were 250 paralyzed and 50 deaths. All the others suffered little more than nausea, vomiting, fever and weakness in the muscles for a short time.

Infantile paralysis is a misnomer; adults may also be attacked. In a few small epidemics in isolated quarters the patients have been largely adults. The question has arisen why they have not been attacked more in the recent epidemic of 1916 and many other previous ones in this country. A history of these epidemics may answer the question. There has been an epidemic in the East every four years since 1900. The age incidence of these epidemics have been between one and four years.

The answer as is evident is that we may all have had it in the milder form.

This raises the question why St. Louis has not suffered like New York. It is time now for another epidemic in this country, and it is interesting that several cases have been seen here in the city this year. I have wondered if the severer form could, by any chance, have been uncommon here. It will take, of course, further careful data to answer this question.

Cerebrospinal Fever.—Cerebrospinal fever is probably almost exclusively carried in the mouths of otherwise healthy individuals. It is caused by a small, biscuit-shaped coccus which occurs generally in groups of two.

Like in the case of infantile paralysis, there are also many individuals who are but little affected by this germ. There are also many carriers in our midst and consequently when people are crowded together there are always chances of infection. This was seen in the army camps during the war. Before the medical corps was fully organized, large numbers fell ill of this disease in the Great Lakes and other camps. Soon, however, all carriers were known and segregated or made free of their bacteria. The epidemic ceased at once.

Tuberculosis.—Tuberculosis is probably the most widespread of any of the diseases, not only of those already discussed, but I mean

any disease. Probably the whole population over twenty years of age has been at least once or several times infected. In spite of this fact only a few have suffered to any extent from the disease. The question of resistance becomes, therefore, most pertinent in this disease.

The disease is due to a minute organism belonging to a group, as far as its shape and staining properties are concerned, to which the leprosy bacillus belongs. This organism resists drying and may live for a long time in the dust and dirt and it is probably by this means that most individuals are infected.

The immediate problem in medical research applying to this disease is evidently what determines the resistance. A few facts have been learned. To what extent heredity plays a part in determining the resistance of an individual to tuberculosis I think is in part at least problematical. I have known the children of tuberculous parents to all die of the disease. In other instances strong men may spring from them.

That healthy surroundings, fresh air, good food, especially of the right kind, may not only keep one from acquiring the disease but may cure one with large lesions I think is certain.

So far in the discussion I have confined myself to disease caused by bacteria. It may be of interest to look at some other, such as those caused by animal parasites of which there are many.

Among these malaria and hookworm may be of interest to you.

Both of these diseases are peculiar to the tropics. Malaria is not, however, uncommon in this part of the country.

Malaria.—In this country there are three distinct species of malarial parasites. The aestivo-autumnal parasite causes the more severe disease. The fever in these cases is continuous and the disease is probably what was once known as typhoid-malaria. Of course, typhoid fever may occur with malaria, but not as commonly as we at one time supposed. Another is the so-called tertian parasite causing a disease characterized by chills and fever. The chills with a single infection occur every third day. The third is the quartan parasite. The chills in individuals affected with this parasite occur every fourth day.

The malarian parasite belongs to the protozoans. It is an animal parasite. It has two cycles—a sexual cycle and an asexual cycle. The sexual cycle occurs in the mosquito. The mature male and female forms are found in man and the mosquitoes are infected when sucking the blood. In the wall of the stomach of the mosquito the fertilized female breaks up into bodies which pass into the body cavity and eventually into the salivary glands

of these insects. From these glands they may again enter the blood of man when he is bitten by an infected mosquito. In the blood they enter the red corpuscles where they grow and eventually break up into a number of bodies which escape and enter other red cells. Fever occurs with these periods of segmentation. There is no definite regularity in the segmentation or breaking up of the forms of the aestivo-autumnal malaria parasite while in the case of the tertian and quartan, these segmentations take place at regular intervals and the chills and fever correspond to these periods.

Malaria is carried by mosquitoes which belong to the genus *Anopheles*. The ordinary *Culex* does not carry it. These mosquitoes may be easily recognized. The easiest method is the position of the insect on the wall. The body of the *Culex* lies parallel with the wall, while the body of the *Anopheles* forms an angle with it.

The problem of prevention in malaria is one of two things. Prevention of the mosquitoes from becoming infected or the extermination of the mosquitoes. The first is practically impossible, so the latter becomes a necessity.

Hookworm Disease.—Hookworm is a disease seen only farther south than St. Louis. It is a result of a small worm infecting the intestines. The symptoms of the disease are anemia, lassitude, and emaciation. Individuals suffering with it often develop abnormal appetites. They eat clothing and dirt. The clay eaters of the southern states are probably largely the result of it.

Hookworm disease has been but recently known. It formed probably as Stiles has stated, one of the worst of the plagues infecting the soldiers in the Southern Prison Camps during the Civil War.

The hookworms, larva, and eggs are found in the intestines. The ground on which the offal of these patients is deposited becomes thusly infected with them. The larva may live in certain kinds of soil for a considerable time.

They may enter the intestines of man through the eating of the dirt, but probably this is not the common way. They enter in most cases through the feet. Such infected feet are common among those going barefooted in the South. Their entrance causes itching. This is known as "ground itch." From the feet they travel in the body to the lungs. From here they are coughed up and swallowed.

The study of hookworm has been interesting, therefore, from many points of view. The cure of it in many instances removed a part of the so-called poor white trash of the South. Many were nothing more than sufferers from this disease. It has explained also in large

part the existence of the clay eaters. The disease is readily curable, and may be easily eliminated through the proper destruction of sewage and the wearing of shoes.

Diseases Due to Common Foods.—For a great many years it has been known that hay fever is the result of breathing pollen of certain weeds. It has further been known that an individual sensitive to one weed need not be sensitive to another. There are individuals who suffered from this disease only when they came in contact with roses; others with golden rod, and others with rag weed.

In the same way it was known that certain people cannot eat strawberries and others oranges, etc., without having a disagreeable attack of eczema in one case or hives in another. That many cases of the so-called chronic eczema and hives and many cases of asthma are due to other and more common food substances was not fully appreciated, however, until a few years ago. As a medical student, I remember individuals suffering with asthma were advised to go west or south or north. Those living near the sea were sent inland, and those living inland were sent to the sea. Some cases were improved. One I remember in particular was a man who had an attack whenever he visited a cellar where fish were being cleaned. His business sometimes took him there.

The man was evidently sensitive to fish.

I remember a girl in my acquaintance who suffered hives for over twelve years. She was treated from coast to coast. Two years ago these attacks were studied in relation to her diet. She not only kept a careful record of her diet, but she also was tested for her reaction to the proteins extracted from the commoner foods used in her diet, such as corn, wheat, beef, pork, milk, etc. It was found that when wheat proteins were placed on a slightly injured part of her skin, a hive developed in a few minutes. The same was also true for beef, but for no others.

These two types of food were taken from her diet, and she was allowed to eat of neither for several months. After this time she was given at first very small amounts, then more, and now she eats a moderate amount of each and has been free from her hives for over a year. Feeding has not always cured in these cases. Vaccination is often better, especially in the cases of hay fever and asthma.

Cases of asthma may also be mentioned, one in particular.

A girl in her thirties had suffered attacks of asthma since her second year. She had been seen by many physicians. Her throat had been frequently treated. She had gone to live in many parts of the country seeking relief without avail. Skin sensitization tests showed a

reaction to wheat. The removal of wheat flour from her diet has given her permanent relief.

It must be remembered of course, however, that not all of these cases are due to food, some may be due to the odor of horses, and others may be due to bacteria living and dying in certain parts of the body, etc.

To Chandler Walker, working at Harvard, we owe the development of methods of skin testing which allows the determination of these causes. These are now available and are widely used in the medical profession both by skin specialists and certain of the general practitioners who have specially trained themselves.

Cancer.—The last disease which I shall mention is cancer. It really does not belong in the positive part of this paper, because I am sorry to tell you the cause is unknown. The reason I mention it here is because of its wide distribution and the seriousness of its consequences. As a cause of death in older individuals it is among the foremost. The medical profession today is exerting its best efforts for its solution. A large amount of money is being spent here and abroad. In your own city some work is being carried on.

It will be useless for me to attempt to go into this work in detail with you today. Time is not available. Here are a few facts that might, however, be mentioned. They are as follows: (1) Cancer is at first a localized disease which may be eradicated if the growth is removed early with the knife, or if it be destroyed by radium or X-ray. That applies, however, only to those cancers where such removal and destruction will not impair an organ vitally important for life.

(2) In animals cancer is certainly a disease which is more common in certain families than others.

(3) Again, in animals when pieces of cancer are taken from one animal and transplanted into another of the same variety and species it will grow in the animal in which it is placed.

(4) Continuous injury leading to chronic ulceration, especially injury with certain substances such as X-ray, coal tar, tobacco, etc., are evidently predisposing factors.

In this lecture it has been impossible for me to take up but a few diseases and those considered have been but briefly touched upon. It is impossible in so short a time to give you any broader or more comprehensive view of the subject and I am not sure that you would necessarily wish it.

What I have thought you wanted to hear is "how medicine is advancing." What I have wanted to tell you is that we as medical men

need your co-operation not only in pushing these studies to their ultimate conclusion, but in putting into practice what they have already taught. Medicine is no longer secret and mythical but scientific. It is the application of the fundamental sciences. Its further advancement is, therefore, definitely allied with the advance of knowledge as a whole.

The two laws passed by the legislature of this state give (1st) recognition to the chiropractor and (2nd) lower the standards of medical education so that the poorer school now non-existent may again come into their own. The first law was vetoed by the governor. The second was signed by him and is now a law.

Not only the advancement of medicine but the application of modern medicine requires the most skilled hands. The question of first consideration is that of diagnosis, the second is that of treatment and prevention.

The last, the prevention as far as infectious diseases is concerned is the duty of the state. To prevent an infectious disease from occurring it must be rid from our midst. The sick must be hunted down, cured or isolated, and the avenues of infection destroyed.

Through previous analysis of disease it has now become possible to eradicate several of the worst of these diseases. The prevention of typhoid and yellow fever alone has made immense tracts of most fertile land capable of cultivation. It has made available in our cities thousands of otherwise sick or missing productive men. It has opened our southern seaports for greater avenues of trade. Havana, once a disease-stricken district, is now a large, beautiful and prosperous city.

The other two phases of medicine, diagnosis and treatment, are in the hand of the physician. Without diagnosis no disease should ever be treated, because the successful treatment of one disease is in no measure that of another.

The methods of both diagnosis and treatment have in recent years grown to great proportions. The differentiation of disease requires in every instance a most careful fundamental training as well as long experience. In other instances it requires the use of machines, such as the X-ray, the electro-cardiogram, etc., and the hands of trained chemists and physicists. It must be remembered that the failure to cure many cases is not due to the lack of an available treatment or skilled hands to administer it but to lack of its proper recognition.

The treatment of certain diseases is very difficult while those of others is very simple. The latter may be readily entrusted to the nurse or less skilled hands while others require very special and detailed training of such

a nature that no man can acquire it without exerting his whole effort in that direction. Medicine has appreciated these facts and organized accordingly. The diagnosis is in the hands of the family physician who has at his command the trained surgeon, the trained X-ray man, the chemist, the nurse, and the other specialists in medicine.

Once having differentiated the disease if the treatment comes within his domain he cares for it, if not he refers it to the proper hands.

The various sects, competitors of modern medicine, which have sprung up in our midst have failed completely in that they have not considered the importance of diagnosis. They are administers of certain forms of treatment. They have certain success because this treatment helps a few of their patients. In the majority it will not work.

Are we as one of the greatest states in the union going to risk the well-being of this other larger crowd, a part of whom may be uninformed, by raising these sects or any one of them to a place beside established medicine. Modern medicine has not grown over night, but like government is the outgrowth of the experience of ages.

The rapid strides medicine has made in recent years and the added complexity of the necessary training, it is true, has led to a decrease in the number of medical students and a dearth of physicians in the community.

Are we in Missouri going to meet this necessity by lowering medical standards? If the referendum before you today carries that is the precedence you have set.

Is such befitting of so great and wealthy a state in which the expenditure of a small sum in the aid of established medicine would meet the requirements? No, it is not! Not only because it is not in harmony with an ideal for advance but because of the practical side of the question. It must be remembered that the discovery of yeast fermentation in the manufacture of beer by Pasteur alone increased the wealth of France sufficient to pay the war indemnity of 1870. The eradication of typhoid fever from our midst has released us of an expenditure of money and productive individuals running into the billions and hundreds of thousands. We ascribe our present prosperity to several things but it must not be forgotten that this is one of the very foremost.

Because medicine gives everything and asks but little for it, the physician is frequently accused of asking for his mere livelihood.

It must not be forgotten, however, that medicine is not the property of the physician; it is the property of the state. If the state shall prosper it shall prosper because it has good

medicine. Can the anemic, clay-eating sufferer of hookworm disease cultivate his field and operate his mills? Is the man with the poorly set fracture as efficient as he was before? Look at the Army records and see how few men past the age of 30 without excellent medical treatment were capable of becoming soldiers. An existing or poorly treated hernia practically incapacitates a laboring man. Hernia was present in as many as 4 out of every 100 of the active men of the country as shown by the Draft Board statistics.

It is true that it takes a large amount of money to operate the bigger medical institutions as they are organized today. They give, however, the best that is and they are running with the least possible funds. The lack of a small amount of money has, however, made this available in many of them to but two classes, the rich and the poor. The rich can pay; charity has provided for the poor. The middle class is barred from the free wards, and by lack of funds from the private pavilions.

If the referendum before you today carries it simply means that we are going to meet these various deficiencies by thrusting upon ourselves a crowd of hastily and poorly trained doctors. Is this in harmony with the ideals of a great and rich and progressive state of this land? Will it help us to maintain our present position?

600 S. Kingshighway.

THERMOPHORE TREATMENT OF OCULAR NEOPLASMS*

W. E. SHAHAN, M.D.

ST. LOUIS

Several years ago a series of experimentation was undertaken for the purpose of ascertaining the effects of heat on different ocular tissues.¹

The first requisite for such experimentation was the devising of some means of passing accurately measured quantities of heat into sharply circumscribed areas of tissues for measured lengths of time. An instrument termed a thermophore was gradually evolved for this purpose, and by means of this instrument we can maintain masses of metal, termed conductors, at any chosen degree of temperature for any length of time. These conductors have surfaces, termed contact surfaces, of various areas, on their ends, and by holding these

contact surfaces against the tissues to be treated, a definite and easily reproducible number of degrees of temperature can be passed into them for any definite number of minutes.

The original inspiration for this work was a desire to determine the thermal death point of intracorneal pneumococci. This was established at 152 to 158 degrees F. applied firmly to the infected area for one minute, and is now a successful routine treatment of hypopyon keratitis with many of us.

During the experimental work involved in this it was early realized that different varieties of tissues had different thermal death points. The corneal epithelium was destroyed by 116 degrees F. applied for ten minutes or 130 degrees F. applied for one minute. Also 130 degrees F. applied to the cornea for ten minutes or 140 degrees applied for five minutes, would cause a permanent gray atrophy of iris tissues directly opposite the area of cornea heated, without permanent clouding of the cornea. Moreover it was definitely established on more than forty glaucomatous eyes treated with the thermophore that the bulbar conjunctiva, sclera and cornea would stand 140 degrees F. for five minutes without permanently harmful results.²

Out of the mass of clinical and experimental information gradually acquired the idea arose that succulent or new tissues growing upon the normal bulbar tissues might have a thermal death point below that of the normal tissues, and it was decided to try upon some of these neoplasms a degree of heat already established as safe for normal tissues.

CASE 1.—L. A. B., aged 70, occurring in the practice of Dr. A. E. Ewing, had a peculiar growth, beginning 12 years previously, along the inner corneal margin and gradually increasing in size until it now extends 8 mm. along limbus and 2 mm. upon cornea. Its surface is covered with soft, irregular elevations of a greasy substance, much of which can be easily scraped off leaving a ground glass appearing base which does not stain with fluorescein. This material had to be scraped off about every two weeks to free the patient from an uncomfortable scratchy feeling. The precise nature of this growth was never determined but it was suspected of being a primary epithelioma of the corneal epithelium.

June 1, 1919, applied 130 degrees F. to upper horn of growth for one minute. Epithelium destroyed for one and one-half mm. beyond growth. Growth more translucent at site of application, showing fine blood vessels extending out into it from limbus.

June 2, growth still free from scum at site of application.

June 4, growth completely covered by foamy appearing greasy scum. This covered the site of the application as well as the rest of the growth, but on lightly touching this at the site of the application a large pellicle-like flake came off, leaving a fine

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

1. Effects of Heat on the Eye (*Journ. A. M. A.*, Aug. 5, 1916, Vol. LXVII, pp. 414-417). Further Study of the Effects of Heat on the Eye (*Journ. A. M. A.*, June 30, 1917, Vol. LXVIII, pp. 1969-1973).

2. Thermophore Studies in Glaucoma. W. E. Shahan and Lawrence Post (*American Journal of Ophthalmology*, Feb., 1921, Vol. 4, No. 2).

network of blood vessels, which was not covered by epithelium.

June 7, normal epithelium has smoothly covered area denuded of tumor by heat application of June 1st. Applied 135 degrees F. for one minute to middle and lower parts of growth with contact surfaces large enough to cover growth (5 per cent. cocain in 1/4000 adrenalin anesthesia). After application a pellicle of soft material admixed with a little blood was easily removed from heated area. Under this pellicle was left a network of blood vessels extending out almost to the margin of the growth. Entire area was then free from greasy material and stained brightly with fluorescein. No clouding of substantia propria. No pain.

June 8, some discomfort yesterday afternoon. Denuded area nearly covered with epithelium. Middle part of growth not yet desquamated.

June 12, vessels dying away from site of former growth.

June 16, applied 134 degrees F. for one minute to three small remaining areas of the growth.

October 4, all traces of growth gone. Cornea completely clear at its former site. Without a knowledge of the patient's history it would not now be possible to say upon which eye the tumor had been.

CASE 2.—J. B., about 80, from Dr. W. F. Hardy's service at Washington University Dispensary. Large raw looking papilloma occupying whole of outer quadrant of visible globe and extending somewhat upon cornea. Microscopic diagnosis made by Dr. H. D. Lamb.

September 25, 1919, applied thermophore contact surfaces 8 mm. in diameter at 140 degrees F. for one minute. Slight cloudy swelling of growth with darkening of nest-like whorls of blood vessels immediately followed. In the few days following there was a massive discharge of glue-like material from the conjunctiva at the site of the tumor. The patient was injured by a truck and lost sight of for several weeks, but when seen again the tumor had disappeared, except for a little upon the cornea where the contact surfaces had not been placed. This was treated and shortly disappeared leaving a thin, smooth but somewhat contracted bulbar conjunctiva entirely free from papillomatous tissue.

CASE 3.—C. J. H., aged 43, occurring in the practice of Dr. W. R. Donnell. Tumor began growing on inner side of left globe one year ago, and now covers almost the whole of the inner half. It is 18 mm. in vertical and 10 mm. in horizontal diameter but encroaches very slightly upon cornea. The mass is firmly adherent to the sclera and is heaviest above and below. It is rather soft and bleeds easily having no appearance of being associated with a pterygium. Excised several fragments for microscopic investigation. Diagnosis of "squamous carcinoma" was later returned by Dr. Chas. L. Klenk. The eye had been so painful for the past two months that patient was unable to work. Fundus normal, vision 20/24+R and L.

During the period from December 24, 1919, to January 18, 1920, five applications at 140 degrees F. for from one to two minutes with contact surfaces 8 to 10 mm. in diameter were made to different parts of this tumor mass under cocain 5 per cent. adrenalin 1/4000 anesthesia. Each time there would be some chemosis and considerable mucoid discharge from the area heated along with some pain following the treatment but by January 24 the eye was entirely quiet and apparently made a complete recovery. The patient was last seen January 4, 1921, when the eye was entirely quiet, the conjunctiva somewhat thickened but entirely smooth and firm. The patient had had no discomfort and was at work. There was no evidence of any tendency to recur.

CASE 4.—This case occurred in the practice of Dr. W. H. Luedde and was a tough fibrous dermoid cyst. The thermophore was used a number of times on it. The final result was almost a complete failure. The tough material resisted heat as well as sclera and conjunctiva do.

Several other cases have been treated with satisfactory results but the above will suffice to show the principles involved. The success of the treatment depends upon the fact that the thermal death point of epitheliomata, papillomata and other succulent neoplasms is lower than that of bulbar conjunctiva and sclera or cornea.

The particular attractiveness of the treatment is that the temperature used (140 degrees F. for one to two minutes) is far within the limits of safety for other eye tissues. If therefore it is desired to treat a tumor, the nature of which is somewhat uncertain the treatment can be attempted, and if the tumor is such as resists the treatment, the patient is no worse off than he was before.

The treatment is more satisfactory than surgical treatment because the heat penetrates completely through the sclera and can be made to destroy every cell for some distance beneath the contact surface.

If some of the tumor is missed on the first treatment it is safe and easy to get it on a subsequent treatment. Also if there should be a recurrence it would be easy to destroy that.

520 Metropolitan Building.

EAR COMPLICATIONS IN MEASLES*

O. JASON DIXON, M.D.

KANSAS CITY, MO.

I wish to tell you about my experience with measles from the ear standpoint—a complication which is as old as the disease itself and much more common in recent years than we are led to believe.

Measles, unfortunately, has been considered very lightly. The Italians who evidently regarded it no more seriously than we do called it "Morbilli" which means "little sickness."

Long association with a disease breeds a contempt for it, and measles has come to be looked upon as an unavoidable accompaniment of youth. But the story of the ravages of this disease is not complete without the mention of the large number of ear affections which follow.

In my experience with measles the most common organ to suffer has been the ear. I

*Read at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

have found the ear complication to be the most dangerous and destructive—one without much self-limitation such as pneumonia, and in a great number of cases surgical intervention has been required not only to save the function of the ear, but perhaps the life of the patient.

My report deals with the ear complications

work these men were cautioned about the prevalence of measles and the probabilities of their becoming infected. They were told some of the early symptoms and were urged to report promptly to the nurse in case of any illness whatever. The nurse, in turn, held all suspicious cases for diagnosis by an internist, who came to the building three times a day.

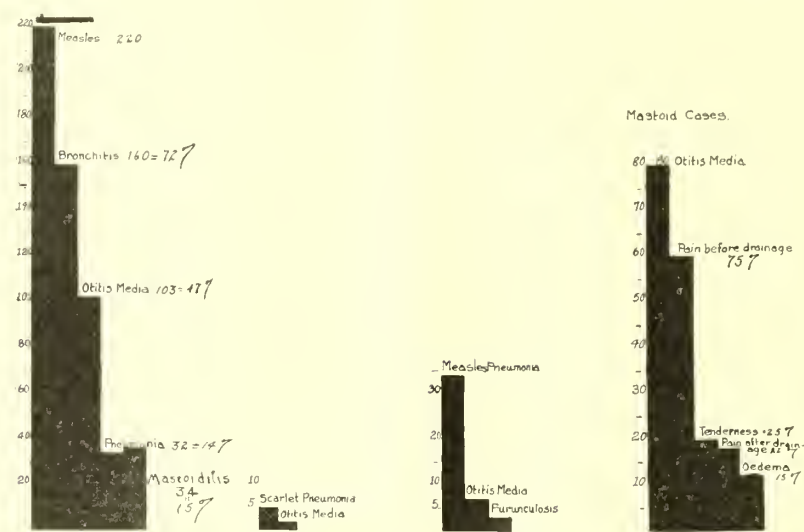


Fig. 1.

in a consecutive series of 220 cases of measles admitted to the hospital from November, 1919, to April, 1920. These patients were all young, healthy adult men averaging 19 years in age, coming from farms in all parts of the United States. They were attending a trade school in Kansas City and for most of them it was

I mention these things to show that I had an excellent opportunity to prevent complications, if possible, by having these cases under close observation before the incubation period. Also, I was free to carry out any line of prophylaxis which I might choose. I was unable to get any help from the literature on the

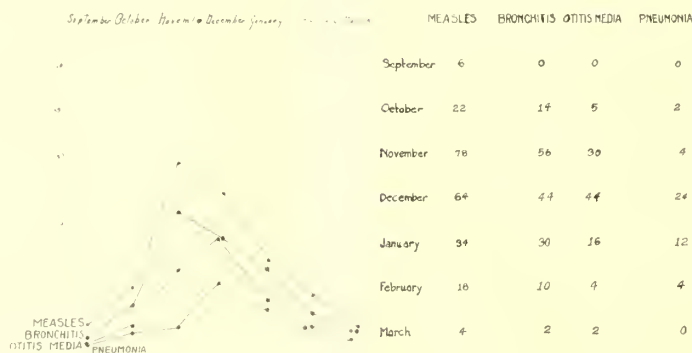


Fig. 2.

their first time away from home. They mingled daily in their work with about 2,000 other young men who were coming and going at all times. There was a moderate congestion in their working and sleeping quarters. In the school building there was an office where a physician or nurse was in constant attendance. After enrolling, and before taking up their

prevention of ear complications. Numerous methods were reported, particularly during the late war, but all with doubtful results.

Generally these patients were easily and early diagnosed, taken immediately to the hospital in an ambulance and put to bed. On their arrival at the hospital a history was taken and a complete physical examination

was made and recorded. Particular attention was given to the ear, nose and throat. The ears were examined with an otoscope and if the view of the drums was obstructed the canals were cleansed with irrigations of warm boracic solution which afforded a quick and easy view of the drum when complications developed. The canal was then dried with cotton and swabbed with 10 per cent. silver nitrate solution. The latter was done in an effort to prevent furunculosis. The patient was put to bed in a warm room, given a light diet, a mild cathartic, codein, heroin, and even morphin when necessary to control the cough. They were also instructed not to cough. Alkalies were pushed and the patient was urged to take fluids. The cubicle system was used in each case with about 24 beds to the large ward and 4 to 10 beds in the small ones. Controlling the cough was the only treatment which I felt aided in the prevention of otitis, as otitis increased or decreased in proportion to the bronchitis. I got no results from the use of local medication, which was, so far as I could learn, the experience of other men in their attempts to sterilize the naso-pharynx. Only two of these cases had had a complete tonsillectomy. The tonsils were nearly all large and cryptic.

Otitis media (47 per cent.) and furunculosis (17 per cent.) became so frequent that each patient on admission was treated as if it were a known fact that he would develop both these complications. At first the nurse in charge of each ward took care of each ear case along with her other routine work. As the complications increased in frequency, it became necessary to put on a special nurse who did nothing but take care of ear cases. This nurse was responsible for these cases from their initial otitis to further complications and assisted me with all operations.

Because of the frequent spontaneous drum ruptures (25 per cent.) which occurred without the knowledge of the ward nurses, I was inclined to think that probably they did not appreciate the seriousness of ear complications, and were not watching the patients closely enough. In an effort to obviate this the following standing orders were issued:

All measles patients are to be watched closely for ear complications.

Twice daily each patient is to be questioned for pain, stuffy, full, and buzzing, ringing, or numb sensations in his ears and his hearing is to be noted.

These findings are to be recorded daily whether positive or negative. In case of any positive findings, or if in doubt, the ear nurse is to be informed immediately.

Yet with all these precautions it was not at all uncommon to find a patient whose ear was

discharging all over his pillow without the knowledge of either the nurse or the patient. And upon questioning the latter he insisted that he had had no pain or peculiar sensation in his ear.

Upon my arrival at the hospital in the morning the nurse reported to me the new cases with ear complaints which had developed during the night which she had already seen. I went immediately to these cases and examined them in the ward. If the patient needed surgical attention he was moved out of the ward and into the treatment room without telling him what we planned to do. It was necessary to be very careful in the wards as regards inflicting pain on the examined patient, as I early learned that these boys would suffer intensely for a long time before they would voluntarily report their condition, fearing the effects of a paracentesis.

After receiving ear treatment the patient was sent to the ear ward where all measles cases that had developed suppurative middle ears were kept. This immediate treatment consisted of a free incision of the drum and the insertion of an ear wick to be changed as often as necessary. Irrigation was used only to free the canal of crusted blood.

At the time of this examination each patient was given a separate page in "the ear book," where all data concerning his ear was recorded.

I saw every case admitted to my service every day, at which time the amount and character of the discharge was noted, the canal was cleansed, the drum, canal, and mastoid process inspected and a fresh wick inserted, and the findings recorded. The patients were questioned carefully for pain and sleeplessness. These two symptoms I regard valuable as an indication of meningeal irritation being present in all such cases. Another factor which was quite indicative of meningeal involvement was the difficulty in anesthetizing these patients at the time of operation.

After the patient had been treated, he was weighed and this weight was recorded. This proved to be a valuable asset in diagnosing several cases of mastoiditis. All these patients were under weight after they had passed their initial stage of measles, and without a serious complication should have gained weight rapidly. Their gain in weight was in direct proportion to their ear progress.

All discharging ear cases were given small ear pads about three by five inches which were exchanged for clean ones as soon as they were soiled. These soiled pads were immediately destroyed. The dangers of contamination were impressed upon the patient. He was told to keep his hands away from the discharge and was forbidden to use any but his own bed.

There was no interchange of pillows. All linens were carefully sterilized. Prior to this rigid requirement four consecutive cases of otitis media developed in patients coming from the same bed. Two of these developed mastoiditis and were operated upon.

I spent from six to nine hours daily in the hospital with these cases, yet in spite of all the preventive measures, close observation and response to all symptoms, out of 220 cases of measles (103) 47 per cent. developed otitis medias, (37) 17 per cent. developed furunculosis, (34) 15 per cent. developed mastoiditis.* I have kept in touch with these otitis cases since they left the hospital and unfortunately I find that several had a recurrence this last winter and some have been operated upon for mastoiditis.

In comparison with scarlet fever, measles was far in the lead with ear complications as the accompanying chart shows. Only two scarlets came to mastoid operation and they were complicated with measles.

Erysipelas.—Four measles with otitis media had erysipelas. One measles patient without otitis media had erysipelas.

The otitis cases promptly recovered after developing erysipelas.

Influenza.—Prior to the outbreak of the influenza on January 16, 1920, there had been only two deaths from measles, one pneumonia and the other a meningitis of otitic origin. After the arrival of this epidemic the influenza cases died so quickly and frequently that it was impossible to get an estimate of ear complications. Several of my convalescing measles-otitis cases died from influenza.

Bacteriology.—It was quite plain to be seen that we were dealing with a very virulent organism which had quite an affinity for the middle ear and temporal bone, with marked powers of rapid and extensive destruction. Several of these cases were cultured out and agglutinated to one of the pneumococcus types, and was bile soluble, although repeated reports on these initial smears had been streptococci.

Pathology.—Post auricular edema was rare. The periosteum was usually intact, and exposure of the cortex showed a bluish, freely bleeding bone. There was not usually a great deal of pus but the most striking part of the picture was the extensive destruction of bone which frequently extended from the tip of the mastoid process to the middle fossa and forward into the zygoma. The dura and lateral sinus were frequently exposed, showing marked granulation. The cancellous portion of the bone was soft and spongy literally permeated by the infection.

Conclusions.—Measles is not always a child-

hood disease and is equally as serious in adults.

There is as yet no method of destroying virulent organism in the nose and throat.

Ear complications are as much a part of the epidemic as the disease.

In spite of all possible precautions it was impossible to keep down the middle ear infections.

Spontaneous drum ruptures occurred without the knowledge of the patient even under the closest observation.

The ear destruction is rapid and extensive and may require surgical intervention.

823 Lathrop Building.

A NEW OPERATION FOR THE CURE OF NASAL HEMORRHAGE

HUGH MILLER, M.D.

KANSAS CITY, MO.

It is not the purpose of this paper to review the etiology of nasal hemorrhages. It is sufficient to say that hemorrhage may be due to local conditions only, but often the chief etiological factors may be constitutional. The chief local factors are (a) infections both acute and chronic, (b) crusts and scales forming on the mucous membrane which result in ulceration, (c) septal deflections. In certain constitutional conditions, changes or diseases, such as disturbances in the menses, obstructed portal circulation, hemophilia, Bright's disease, purpura, chloremialukemia, arteriosclerosis, nasal hemorrhage is frequent.

Referring to literature, I find fully 90 per cent. of hemorrhages occur on the anterior portion of the nasal septum near its junction with the nasal process of the superior maxillary. It is our purpose therefore to discuss treatment of hemorrhage occurring in this location.

There are at least three definite anatomical reasons for these hemorrhages, as we will attempt to show. (1) While the nasal cavity is richly supplied with blood vessels, in the greater part of this cavity the soft tissues are loosely attached to the bony wall, thereby giving protection to the vessels lying within. This condition does not obtain in the region to which I referred above. Here the soft tissues are not only very thin, as indeed they are over all portions of the septum, but they differ from other portions as they are adherent at this point to the bone and cartilage lying beneath. (2) At this point scales and crusts form, and later ulcer weakening the walls of the artery. (3) Passing through this location

*These mastoid cases will be reported in a subsequent paper.

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

is an arterial anastomosis with one blood current flowing directly against the other. This gives us our trouble and with which we have to deal. There is really but one principal artery here, it being the point of juncture of the nasopalatine and the chief terminal branches of the descending palatine. You will recall that the terminal branch of the palatine after it enters the mouth by the posterior palatine canal passing forward along the outer border of the palatine process of the superior maxillary to the anterior palatine canal, thence passing through the foramen Stenson to the nasal cavity, entering on either side of the nasal crest where it anastomoses with the nasopalatine artery. As stated above this is the point where rupture of the artery usually takes place.

In a recent paper, Dr. A. T. Atkinson recommends the mechanical treatment of nose-bleed, advocating the use of strips of gauze or absorbing cotton, with or without astringent solutions, with which to make compression. In the *Eye, Ear, Nose and Throat Year Book* of 1920, page 284, is a synopsis of his paper, at the conclusion of which the editor, Dr. Geo. E. Shambaugh, makes the following comment:

"The ordinary case of nose bleeding is due to the dilated vessels on the anterior part of the septum and is effectively checked by cauterizing those vessels. The troublesome cases are those in which the bleeding occurs deep in the nose and in which this is complicated by an irregular septum. The checking of the bleeding may be a very difficult procedure. We concur in the view that pressure by means of gauze strips is the best method."

I refer to this paper and to the editorial comment to substantiate my claim that very little surgical procedure has been advocated for permanent correction of this condition.

Treatment of nasal hemorrhage is legion. Methods for controlling are too numerous to even name. A few of which are compression, intranasal packing, cold packs and, etc. Various styptics and hemostatics have been employed. Any and all of which are useful to arrest the hemorrhage temporarily. Cauterization, both chemical and actual, has been employed but with indifferent or varied results.

I have found very meager literature on surgical treatment to overcome this annoying and dangerous condition. Dr. W. A. Patton of New Orleans reports having cured a case of vicarious nasal hemorrhage by doing a submucous resection of the nasal septum. He did the operation to correct a deflection and to his surprise there did not occur the hemorrhage at subsequent menstrual period. Dr. John Leshur of New York also reports having cured these cases of hemorrhage by sub-

mucous resection. So far as I am able to discover in literature Dr. Leshur has recommended the only surgical procedure with the sole purpose of curing this condition. His operation is as follows: (1) make an incision on the affected side of septum, similar to that in doing a submucous resection; (2) elevating the mucoperichondrium sufficient to get well under the nasopalatine artery, (3) clamping the artery sufficiently to destroy its lumen, having care not to crush so severely as to induce sloughing. It seems to me that several objections may be offered to this operation: First, the operation is nearly as formidable as is a submucous resection and requires that the operator be one skilled in submucous work. Second, it is not easy to know just how much pressure the tissue will stand and yet avoid sloughing. Third, there is no definite way to know that the artery has been completely closed. Fourth, it does not close the nasal orifice of Stenson's foramen which is very necessary.

Should the artery just outside the orifice be severed the nasopalatine artery will retract and close. This cannot take place within the bony canal. No secure control of this hemorrhage it is essential to close the nasal orifice of Stenson's foramen. Cauterization does not close the canal. Compression will not do this. One may secure temporary healing over this opening, but trouble may be expected later.

Now the purpose of this paper is to present an operation which I have employed a number of times with perfectly satisfactory results. Sometimes while doing a mastoidectomy or other bone surgery a persisting bleeding point in the bone is encountered. By driving a blunt instrument into the bony tissue at this bleeding point the oozing stops. This suggested to me the operation.

After having thoroughly anesthetized the parts at the point where the terminal branch of the descending palatine artery emerges through the nasal opening of Stenson's foramen, cut directly downward and inward on this artery, dissecting away the soft tissue freely. Then take a dulled chisel placing it over this foramen, and by tapping the chisel, chopping up the bone so to speak around the orifice so as to be able to force the bony particles into the orifice. Now by means of the mallet and a dull blunted instrument drive the bony particles downward, inward and forward effectually closing the nasal orifice of foramen Stenson. It is not well to use adrenalin or similar drugs during the operation as it is desired that all hemorrhage, other than mere capillary, occasioned by the incision be brought under control by the procedure of the operation itself. When this operation is completed it is well to sponge away the surface,

and waiting a few minutes, to note if the desired results have been obtained—that is to see if hemorrhage has been effectually arrested. In operating, one should be careful not to hit the chisel heavy blows with the mallet or to have the chisel sharp or directed backward as one could easily cut through the floor to the oral cavity. When the operator is satisfied that arterial hemorrhage is under control the soft tissues are returned over the wound and this portion of the nasal cavity loosely packed. The packing is merely to protect the wound and to collect the capillary oozing. It is left in place twenty-four hours. After this a dusting powder is placed on the wound. We have found scarlet emulsion (P. D.) useful as a post-operative dressing.

For years I have been struggling with these cases, trying to control the hemorrhages, only to find I had relieved my patient but temporarily. Possibly many of you have had like experiences. I recall a case some years before I had adopted this procedure, a young man, about twenty years of age, had been having nasal hemorrhage for some five months—three months while in Denver. His friends brought him to Kansas City, where he was in a hospital for some two or three weeks without the hemorrhage being controlled. Later he was referred to me. He looked like a sufferer of some severe type of anemia. I used the usual procedure, I packed the nose, cauterized the ulcer, used various styptics, etc., but without permanent results. After several weeks in my care, he failed to return. As had others, so had I failed. I recite this case because it is typical of the cases under discussion. Since adopting this surgical procedure I have had a number of such cases and have been able quickly to relieve them permanently.

The following, to illustrate, are a few typical cases that I have operated upon:

CASE 1. Mr. C., Atchison, Kansas, a man of clean physical history came to me March, 1919. He had been a sufferer for some time with nasal hemorrhage. Present attack of several weeks' duration. Condition was seemingly uncontrollable by the usual methods. I operated upon him securing control promptly. More than two years now have passed and no further annoyance.

CASE 2. Mr. E., Kansas City, Mo. This gentleman had a number of attacks, some of which quite severe. In 1917 I treated him. In December, 1919, after some ten days of almost constant hemorrhage, I prevailed upon him to have the operation. He left the hospital the third day. There has been no return.

CASE 3. Miss C., Kansas City, Mo. A lady, past 40 years, came to me February of this year; history negative, no high blood pressure, no kidney lesion. She had been bleeding until she was almost exsanguinated. Three months have passed since the operation without trouble. The patient has gained her former color and strength. In a letter just received she says she has gained 5 pounds in weight.

520 Chambers Building.

THE IMPORTANCE OF CORRECTING SMALL REFRACTIVE ERRORS FOR PATIENTS WITH SYMPTOMS OF EYE STRAIN*

J. P. McCANN, M.D.

WARRENSBURG, MO.

This subject should interest every general physician as well as oculist. Every man in general practice is almost daily confronted with patients with symptoms of eye strain. Unfortunately too many men have an idea that if the error is small that in all probability the symptoms complained of come from other causes, and that only the large errors need correcting.

Quite the contrary is true. The small errors cause more trouble than the large ones.

This statement seems so much like a paradox that it is hard to get many men to understand or to believe it.

It is explained in this way. Nature is continually striving to give every eye normal vision.

If the error is small it can be corrected by contracting certain muscular fibers, thereby producing a perfect image on the retina, but if the error is large it cannot be so easily corrected by muscular action, so the patient may have vision below normal without eye strain.

When nature cannot give an eye normal vision by straining she ceases to make the effort to do so, and therefore the patient does not have symptoms produced by eye strain.

In the case of the small error nature can and does overcome the strain by muscular action and the eye has normal vision. This patient may show symptoms of eye strain.

It is almost beyond belief the amount of trouble a small refractive error can cause in a patient with a sensitive nervous system, and can only be appreciated by those who have had experience with a large number of refractive cases and who are trying to do close refractive work.

It is not to be understood that all who have small refractive errors have eye symptoms, for such is not the case, but people with small refractive errors are just as apt, or a little more so, to have symptoms than those with large errors. There are very few people without some refractive error, but only a small percentage have symptoms from the error. So in determining whether a patient shall be sent to an oculist for an examination for glasses depends more on the symptoms rather than on the question whether or not they have a refractive error.

Ninety or ninety-five per cent. of people have some refractive error, but the percentage of people who suffer from eye strain is com-

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

paratively small. So the question is, Are the symptoms caused from the error?

The class of cases in which probably more mistakes are made by men doing refractive work in a limited way is hyperopia in young people. Many physicians have a Snellen's test card in their office and in cases of suspected eye strain have the patient read as far down the card as they can. If they read 20-20 or better it is taken for granted that there is no trouble with the eyes. This is all very misleading. A young person with several diopters of hyperopia can by contracting the circular fibers of the ciliary muscle produce a perfect image on the retina and see 20-20 or better.

Dr. Jno. Green in an article in *Modern Medicine* speaks of patients who were able to accommodate as much as four diopters.

A patient in whom it is suspected that the symptoms come from eye strain should have the eyes thoroughly relaxed with a cycloplegic and carefully gone over by a competent oculist. In no other way can the exact amount of the error be determined or the exact axis be found for the cylinders.

The principal object of this paper is to impress upon you the importance of having the amount of correction and the axis of the cylinders exactly correct.

Ernest Clark in the Chicago Year Book of 1918 states that glasses which are nearly but not quite right cause a great deal of harm by causing a new strain that did not exist before.

I wish to report a few cases which emphasize the importance of correcting the small errors when symptoms of eye strain are present:

The patient who has symptoms of eye strain and needs a +1.25 Sph. with a +.25 Cyl. but wears only the +1.25 Sph. is in the same condition as the patient who only needs the +.25 Cyl. but does not wear glasses at all. Each have a +.25 Cyl. of uncorrected error. I wish to present one more case which illustrates how much inconvenience a cylinder with the axis nearly but not quite right can cause:

CASE 1.—Miss B., aged 34, occupation seamstress; general health good, never wore glasses. Complained of headaches and eyes burning when used long at a time. She complained of being nervous after continued eyework. The eyes were refracted under homatropine and took, right eye, no sphere with a +.25 cyl. axis 75; left eye, no sphere with a +.12 cyl. axis 90.

This was given her with a feeling of doubt. I felt that the amounts were so small that perhaps her symptoms came from some other cause. For the first few days she complained that the glasses were not of any benefit. She saw just as well without them, still had headaches and had a constant desire to take them off, which she did very frequently.

She was finally persuaded to keep them on constantly and give them a trial. In a few days the headaches vanished and she fell very much in love with her glasses. This was four years ago. She has had very little if any headaches since with one exception. She broke one lens and had to be without her glasses four days while being repaired. During that time she had headaches and all her old symptoms returned. She had to discontinue her work for the last two days before the glasses came back. After they were put on again the headaches immediately stopped and she had not had any trouble since from her eyes.

CASE 2.—Mrs. N., aged 47, occupation housewife; general health good; had worn glasses fit by a jeweler for seven or eight years. Complained of very severe headaches when reading or sewing. Had sick headache for one to two days after riding on a train. She was wearing a +1.50 sphere in each eye with no cylinders. Vision was better with glasses, but there was very little difference in the headaches with or without them. Her eyes were carefully fit under drops after which she was given the following:

Right +1.25 Sph.—+.50 Cyl. Axis 90.

Left +1.50 Sph.—+.25 Cyl. Axis 90.

With a +1.50 added to each eye for near.

In a few days her headaches ceased and since that time she can ride on a train without having any trouble with her head or eyes. This was five years ago and she has had no trouble except two or three times when she bent the frame in such a way as to throw the axis of the cylinders off. Then she had some headaches which disappeared when the frames were straightened. The difference in the glass that was given her by the jeweler and her proper glass was small, but nevertheless one gave relief and the other did not.

CASE 3.—Miss H., aged 20, occupation, student; general health good. Complained of headaches and was fit by Dr. —. He gave her a +.25 Cyl. axis 90 in each eye. She wore this for about two weeks but experienced very severe headaches, sick stomach, and dizziness. When fit carefully I found she needed a +25 Cyl. axis 80 instead of 90 in the right eye and a +25 Cyl. axis 100 instead of 90 in the left eye. The amount of the cylinders was the same but each axis was off 10 degrees. This gave her perfect relief. No headache and no nausea. She has worn this correction for about one month with complete satisfaction.

Very frequently patients will tell you that someone had changed their glasses for them four or five times within a year. One young lady declared that an optician changed her glasses forty times in six months.

If glasses are properly fitted the frequent changing is not necessary. The careless fitting and prescribing of glasses cannot be too strongly condemned. It not only defeats the object sought, that of relieving the symptoms complained of, but frequently does harm.

If eyes are carefully fitted under a cycloplegic, many of the symptoms will be relieved that have not been with a pair of glasses carelessly prescribed.

CONGENITAL ATRESIA OF ESOPHAGUS.—I. Seth Hirsch, New York (*Journal A. M. A.*, May 28, 1921) reviews the literature and reports two cases.

PATHOLOGICAL FRACTURES*

LOUIS RASSIEUR, M.D.

ST. LOUIS

My purpose in bringing up this subject for your consideration is to get a plan of looking at this condition with a view to its proper significance, its early diagnosis and its treatment. Since October 1st, 1909, we have had at St. Mary's Infirmary five hundred and eighty-eight fractures. They were distributed as follows: Bones of face (multiple), 2; glabella, 1; superior maxilla, 1; inferior maxilla, 15; zygoma, 1; skull, 43; vertebrae, 7; scapula, 9; ribs, 63; clavicle, 22; ilium, 5; pelvis, 8; humerus, 67; elbow, 7; ulna, 5; radius, 16; radius and ulna, 18; Colles' fracture, 35; metacarpals, 18; phalanges, 24; femur, 101; tibia, 26; fibula, 15; tibia and fibula, 55; patella, 10; ankle, 13; malleolus, 3.

Of this number five cases were unquestionably pathological, sometimes called spontaneous fractures. They were distributed as follows: Femur (subtrochanteric), 3; upper epiphyseal line of the tibia, 1; lower end of the tibia, 1.

Feeling that a brief history of each of these five patients will aid us in our deliberations I shall relate the details relevant to our plan of research.

CASE 1.—Mr. W. L. B., aged 62 years, entered the Infirmary January 12, 1913. He had had a leg ulcer above the ankle of twenty-seven years' standing. It was caused by a rock injury received while he was plowing. He denies that he had lues. He presented a carcinomatous degenerated ulcer just above the ankle. Both tibia and fibula were broken at the site of the ulcer due to carcinomatous infiltration. There was no history of a recent fall or injury. An amputation was made in the thigh near the knee. The patient left the Infirmary thirteen days later with union by first intention.

CASE 2.—Mr. J. P., aged 22 years, entered the Infirmary January 26, 1916. He had been treated for acute rheumatism of the knee-joint. There was a contracture at this site and many sinuses leading to the upper epiphyseal line of the tibia. There was no history of a recent fall or injury. Under ether anesthesia multiple incisions of the left leg and the left thigh were made. About two liters of pus escaped. The pus had separated the upper epiphysis of the tibia and had dissected along the shaft of the femur to the trochanters, separating the hamstrings into veritable muscular bands. The pus seemingly had not entered the joint. The patient died nineteen days after entering the Infirmary from chronic septicemia caused by chronic osteomyelitis.

CASE 3.—Mrs. B. G., aged 52 years, entered the Infirmary July 30, 1918. She had been sent to the Infirmary with a diagnosis of dislocation of the hip-joint. There was no history of a recent fall or injury. She had been in bed for two weeks. She had pain referred to the hip-joint when the thigh was manipulated. The position of the lower extremity was: the leg was flexed on the thigh and the thigh was slightly flexed and slightly abducted. The X-ray picture (Fig. 1) shows a fracture of the shaft be-



Fig. 1. Case III.—A transverse fracture below the trochanters. The head of the femur is suspicious of carcinomatous metastasis.

low the great trochanter. The head of the femur and also the ischial bone is suspicious of disease. The patient had the following past history: Some years ago she had had her right breast amputated for carcinoma. When she presented herself there were mceastases in the left breast, in the neck, in the liver and elsewhere in the abdomen. The patient died on August 6, 1918, seven days after she had entered the Infirmary.

CASE 4.—Mrs. L. M., aged 39 years, entered the Infirmary January 15, 1920. She said that she had had pain in the right hip for two weeks before she had fractured her femur. There was no history



Fig. 2. Case IV.—An oblique fracture below the trochanters.

*Read before St. Louis Medical Society, Jan. 25, 1921.

of a recent fall or injury. She said that the bone had "snapped" and that then she fell. The X-ray picture (Fig. 2) shows an oblique fracture of the femur just below the trochanters. The Wassermann reaction was a strong four plus. At this point I wish to recommend that in all pathological fractures, and if possible in all fractures, a Wassermann reaction be made, because syphilis so often affects the bones. She was given intravenously two doses of .6 gram of salvarsan at an interval of one week. The Hodgen splint was applied March 13, 1920, and she had union with much callus. She was discharged on request. Her thigh was re-enforced by a plaster cast.



Fig. 3. Case V.—A fracture below the trochanters. There is a fusiform enlargement and a circumscribed deficiency of inorganic matter.

CASE 5.—Mrs. E. S., aged 60 years, entered the Infirmary February 18, 1920. She walked into the Infirmary. She said that for eight months she has had pain in her right hip-joint. For three months she has had all the signs of sciatica in her right lower extremity. For this period she had received medical treatment for sciatica. On February 19, 1920, her second day in the Infirmary, she got out of her bed and walked to the bathroom. This is a distance of one hundred feet. When she returned she went to bed. An hour later she turned around in bed and her lower extremity suddenly grew shorter and her foot turned outward. The X-ray pictures (Figs. 3 and 4) show a fracture of the shaft of the right femur just below the trochanter. The bone at this site shows fusiform enlargement and a circumscribed deficiency of inorganic matter. There is an angular displacement. February 21, 1920, an exploratory osteotomy was made. The tumor tissue was curetted away. The tumor proved to be a small spindle-celled sarcoma. The Thomas splint was applied. This was later replaced by a Hodgen splint because she developed an ischial decubitus from the pressure of the Thomas pelvic ring. There was union of the soft tissues by first intention. The patient was given Coley's fluid obtained from Martha Tracy's Laboratory of Philadelphia. She had received more than one ounce of this fluid subcutaneously. She was not benefited by anything that was done for her. She died April 20, 1920. An autopsy was not allowed. I believe that the tumor was primary in the femur because no other tumor could be found on physical examination.

COMMENT.

When we consider the histories just read we are impressed by the following: (1) These fractures in each instance occurred in the lower extremity, the weight-bearing part of our body. (2) The death rate was very high. Three out of the five cases died shortly after they entered the Infirmary. (3) In each instance the fracture was not a disease entity,

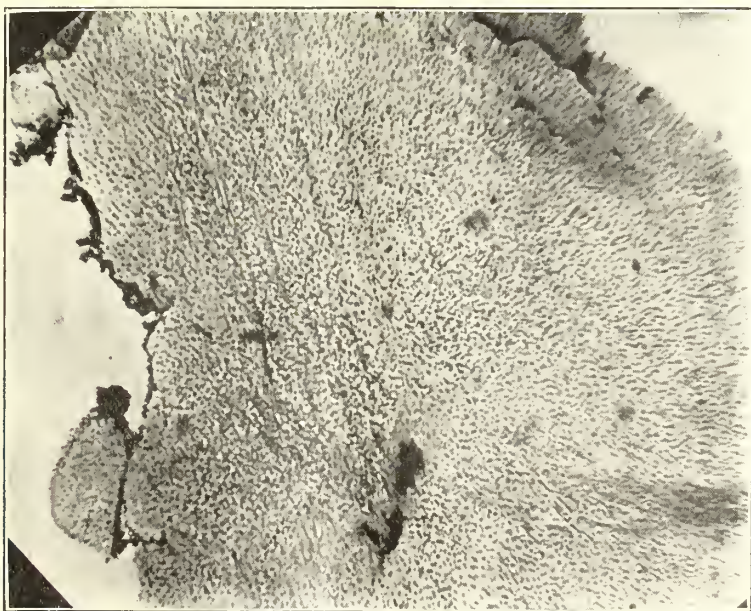


Fig. 4. Case V.—The tumor tissue shows a small, spindle-cell sarcoma.

but was symptomatic of some serious general or grave local disease. (4) In no instance was the underlying causal factor recognized until the fracture had taken place and then only after the patient came in our care. (5) In three out of five times the fracture was located in the shaft of the femur at the sub-trochanteric end. (6) In all of the cases the treatment of the fracture was merely incidental or symptomatic. The real treatment was directed to the underlying cause. In the first case it was carcinoma, which was still local, arising in an old leg ulcer. It responded nicely to amputation. In the second case it was a fulminating osteomyelitis. The patient was very septic and died after several days of septicaemia. In the third case it was a part of a general shower of carcinoma metastases from the breast. In this case the underlying cause could not be influenced by any methods known to us, so we made the patient comfortable until her end, seven days after she had entered the Infirmary. In the fourth case it was a part of a general infection with syphilis. This was proved by a strongly positive Wassermann reaction. This case was benefited most of all because we had a positive method of diagnosis and a specific remedy for the underlying cause. In the fifth case it was a small cell spindle-cell sarcoma which we believe was primary in the femur because we could find no other growth elsewhere by the physical methods of examination which we were permitted to use. The patient was much older than her age in years implied. Consent to an operation of a constructive nature solely was given. The tumor tissue was found and carefully scraped away from the bone. This tumor proved to be a small cell, spindle-cell sarcoma on histological examination. Conforming to the lines of treatment allowed us we used Coley's fluid subcutaneously. The patient grew steadily weaker and died sixty-three days after she had entered the Infirmary. (7) In all the cases there was an absence of a history of violence either direct or indirect. (8) Two of the cases were compound by the very nature of things when they entered the Infirmary. The remaining three were simple and were sub-trochanteric. The reason is easy to understand when one looks at the bony framework of the body from the viewpoint of weight-bearing. These last three cases had for some time before the fracture pain in the hip. I believe that is an important point to remember.

CONCLUSIONS

1. A pathological fracture is highly significant of some severe general disease or of a

grave local condition which may soon become general.

2. A pathological fracture is usually the sign of impending death.

3. When the cause is still local an amputation will cure. When the cause is a general one the prognosis is solely dependent upon whether or not we have a sure cure for the causal factor. In the case of syphilis we have.

SUMMARY

1. A pathological fracture is a symptom not a disease.

2. Make an early diagnosis.

3. For treatment employ a specific remedy if we have one, if not amputate.

4. Make a Wassermann reaction in all fractures.

318 University Club Building.

ROUTE AND RATE OF ABSORPTION OF SUBCUTANEOUSLY INJECTED SERUM.—Julian H. Lewis, Chicago (*Journal A. M. A.*, May 14, 1921), states that the complement fixation test can be used to detect extremely small amounts of one serum in the presence of larger amounts of another.

The absorption of serum from the subcutaneous tissues is very slow.

The main route of absorption from the subcutaneous tissues is through the lymphatics.

The rate of absorption of horse serum injected subcutaneously is apparently too slow to explain the cases of sudden anaphylactic death which have occasionally followed the administration of anti-toxic serums in man.

Certain procedures, such as massage of the site of injection, and the injecting of large volumes under high pressure can hasten the appearance in the circulation of horse serum injected subcutaneously.

Because of the suddenness with which it appears, and because of the analogy to the occurrence of fat emboli after the subcutaneous injection of oily substances, acute anaphylactic death in man following subcutaneous injections of horse serum is probably due to an accidental intravenous injection of the serum.

The need of care to exclude as far as possible the injury of a subcutaneous blood vessel during subcutaneous injection of horse serum is indicated.

GASTRIC ANALYSIS.—An examination of the abnormal gastric residuum was made by William W. Lermann, Martin E. Rehfuess and Philip B. Hawk, Philadelphia (*Journal A. M. A.*, May 14, 1921). The main points in this discussion are: The examination of the fasting stomach is in reality an examination of the interdigestive period of gastric activity. The average normal findings and the mean variations are a basis for the interpretation of pathologic variations. The determination of swallowed mucopus as an evidence of focal infection above the level of the cardia is one of the simplest and most satisfactory means at our disposal for accurately determining the presence of an open focal infection. The examination of the residuum is vitally important, as it is likely to reveal the presence of pathologic exudates which are obscured by the food material during the digestive phase.

THE JOURNAL

OF THE

Missouri State Medical Association

NOVEMBER, 1921.

EDITORIALS

A BAS POLITICS

A rift has appeared in the clouds that have hung like a dark pall over the management of the insane asylums in Missouri for three-quarters of a century, and the dawn of a new day in the conduct of these institutions seems presaged by the recent action of the non-partisan board of control of the eleemosynary institutions of the state. In fact, the declaration of the chairman of the board, that in future the superintendents of the state hospitals will be required to devote their entire time to the care and the treatment of the patients and not be held responsible for the business management, commits the board to that policy. In addition to this we have the promise of the medical director of the board that the political affiliation of a prospective appointee will have no weight with the board in the consideration of his qualifications for the position. It is therefore with very considerable satisfaction that we note the result of the recent action of the board in appointing superintendents for the state institutions. Dr. M. O. Biggs, for the past eight years superintendent at State Hospital No. 1, in Fulton, has been reappointed, and Dr. Porter E. Williams, superintendent at Hospital No. 2, in St. Joseph, was also reappointed. Both of these physicians have demonstrated their value to the state as competent to direct the treatment of insane patients along modern lines, and they have done so in spite of the handicap of being compelled to discharge the duties of business superintendents as well as medical superintendents. Relieved of the burden of looking after the business management, as the board promises medical superintendents shall be relieved, there is no doubt that these institutions will show far better results in the near future than it has been possible to obtain in the past.

For State Hospital No. 4 at Farmington the board has appointed Dr. E. E. Brunner, a successful physician of Carrollton, who has had some institutional experience and has been a member of the state board of health for the past few months. No action was taken on the superintendency of State Hospital No. 3 at Nevada where Dr. Craig has been doing good work for the past two years.

For the State Sanatorium the board has selected Dr. J. W. Bruton to be the superintendent. He took charge of the institution about September 1. According to Dr. Ard, the medical director of the board, Mt. Vernon Sanatorium for the treatment of tuberculosis is one of the finest institutions of its kind in the entire country.

The Colony for the Feeble-Minded and Epileptic, at Marshall, passes from the control of Dr. R. P. C. Wilson, who has been superintendent for eight years, Dr. M. H. Topping, of Flat River, having been appointed by the board to succeed Dr. Wilson.

It will be the policy of the board to appoint only the heads of institutions, which is in accord with the assurances given when the bill creating the non-partisan board was adopted, and allow the superintendents to select their own assistant physicians and other subordinates. The board, however, upon the recommendation of Dr. Ard, has appointed a woman physician as assistant at State Hospital No. 1, and announcement was made that women physicians would probably be appointed at the other state hospitals. This, too, is a proper step in line of modernness in the treatment of the wards of the state, for certainly a woman physician, properly equipped with experience and medical training, will find a large field of usefulness among the women inmates.

Politics have been a curse to our state institutions, a fact well known not only to the medical profession but to intelligent laymen everywhere. Let us hope that the curse has been removed forever and that, while celebrating the one hundredth anniversary of Missouri's birth, we have seen the shackles that chained the medical profession to the darkness of a hundred years ago in the treatment of the insane and feeble-minded cast into oblivion and the bright light of science allowed to illumine the unhappy state of these unfortunates.

HYDROTHERAPY AT THE ST. LOUIS CITY SANITARIUM

"Can'st thou not minister to a mind diseased?" said Macbeth. Since the days of the melancholy Dane the same question has been asked, not alone by physicians. Countless thousands of distressed and distracted relatives and friends of those whose minds have become disordered have anxiously demanded an answer to this question.

How terrible the negative is to those most attached to the one with mental disease, only doctors and the ones whose misfortune it is to receive this answer can appreciate. To most folks medicine means a drug—something in a bottle or box, or ampule, to be swallowed,

rubbed in, or injected—and if this definition is used, the answer to the question must be almost or quite negative. However, in the eager search for remedial measures to cure, alleviate the suffering of, or favorably modify mental disease, a number of wonderful remedies have been discovered. Foremost among these is hydrotherapy, when skilfully applied by a well-trained group provided with adequate equipment on wards set apart for this purpose, where the patients remain so long as they require this special treatment.

The human mind is never still when awake. Some form of activity must, in the very nature of it, be going on. If this activity can be directed into better channels, then good results. Therefore, occupational therapy follows hydrotherapy immediately, and right on the ward where the latter has been applied.

Physiotherapy also has its part. Diversional influences, such as music, pictures, dances, games—all help to get disordered minds functioning in smoother channels.

It is therefore an occasion for great satisfaction to be able to announce that Mr. Cunliff, Director of Public Welfare of St. Louis, and Dr. Jordan, Hospital Commissioner, are planning a full hydrotherapeutic equipment for the City Sanitarium, a ward for men and one for women, where well-trained attendants will give intensive care and apply the merciful influences of continuous tubs, warm packs, soothing showers, or stimulating impacts.

We would predict that the equipment will add materially to the number of cures. Hydrotherapy is no longer an experiment. We know that by its use we can absolutely abolish all forms of mechanical restraint—all cuffs, camisoles, straight-jackets, etc. And we know that, apart from its curative value in a certain few, its merciful effect can reach practically all disturbed mental states. Though we may not effect a cure, it is our duty to alleviate suffering. That hydrotherapy does this the patients themselves testify abundantly.

PLEA FOR A HEALTH BUILDING AT THE STATE FAIR

One hundred and twenty-five thousand dollars for hog comfort, not one cent for human health at the State Fair is the record of appropriations by the legislature to the State Fair. The hogs, it was declared, needed a new building in which to house them while they are being exhibited and to provide comfort and accommodations for the people who are interested in hog health. For housing the exhibit where babies are judged and the preservation of human health and life is studied, a tent—a borrowed tent, loaned by the U. S.

Army—is good enough for the people of the state. Fat purses, bulging with gold, enrich the owner of the finest hogs, horses and cattle, and proudly the winner displays the blue ribbons donated by the state for his loving care of the grunting porkers. To the owner of the healthiest baby the state offers, not a purse of gold nor yet a blue ribbon, but crepe, a rosette of white crepe! For ignorance of the laws of hygiene and sanitation often results in the death of babies and children.

Are Missouri's babies less valuable to the state than Missouri's hogs? We have no quarrel with the appropriation of money to stimulate the breeding of high-grade farm stock; 'tis laudable and right to do so. But we have very serious objection to the neglect of human life as manifested by the niggardly policy in providing funds to teach the people how to preserve their own health and life.

The health exhibit displayed by the state board of health and voluntary health organizations at the State Fair last August was one of the most elaborate, well-planned, thoroughly prepared and highly instructive efforts ever put on by the state department of health, but it was excluded from any of the permanent buildings and must either be abandoned or held under canvas, on ground considerably removed from the street and the entrance to the tent more or less obscured by the booths of concessionaries who pre-empt the conspicuous places bordering on the sidewalks. In another column* we present an account of the work undertaken by the state board of health and its results at this exhibit, but nothing is there said about the weather conditions which on two occasions almost destroyed the entire outfit and only through the heroic efforts of the women and men in charge of the exhibit was the tent and its contents saved from utter demolition by high winds and rain. It is very remarkable that, in spite of the adverse conditions, the health commissioner and his assistants saved the exhibits in sufficient completeness to give the 6,000 persons who passed through the tent a few lessons on keeping themselves well. The hogs? Oh, they did not mind the weather. They were nicely penned behind brick walls—old walls to be sure but, nevertheless, rain and wind proof.

In 1912 our Association inaugurated the first human health exhibit at the State Fair and was allowed the use of the auditorium in the Woman's Building, where motion pictures, lantern slides, lectures and a baby health conference were held. In the succeeding year the building was denied us, but space was allotted under the amphitheater. In this place

*Health Exhibit at the State Fair, page 411.

no lectures could be given nor pictures shown. The next year a tent was the best we could get, badly located, and the effort was so poorly attended as to discourage further efforts in this direction.

At that time we suggested that a building should be erected to be in charge of the state board of health where the health exhibit would have permanent quarters and the emergency hospital, the veterinary department, the pure food department, and all co-operating health agencies, might have exhibition facilities commensurate with the importance of their work.

Our state department of health is now so excellently organized and the divisions directing the various branches of health protection performing such good service that it does seem unfortunate for the state longer to ignore the large possibilities of good to be accomplished at the State Fair in improving human health. We hope, therefore, that it will not be long, now that a building has been provided where nice, fat hogs can enjoy sanitary surroundings, before the legislature will provide a building where the people may show their nice, fat babies in attractive, sanitary and healthful surroundings, and learn how they may make their homes and their farms health-promoting instead of disease-breeding places.

MISSOURI STATE CONFERENCE FOR SOCIAL WELFARE

The program of the Missouri State Conference for Social Welfare, which meets in St. Joseph, November 13-15, has much that will interest the physicians and public health officers of the state.

On Monday morning, November 14, there is to be a round table discussion on the health matters of the state over which the chairman of that section, Dr. Geo. H. Jones, former secretary of the State Board of Health and now Director of the Department of Health Service for the Southwestern Division of the Red Cross, will preside. The subjects for discussion and those who are to open the discussions follow:

Tuberculosis; Its Prevention and Arrest, by Dr. Scott P. Child.

How St. Joseph Takes Care of Its Sick Poor, by Dr. Daniel Morton.

Trachoma; with Missouri Statistics, by Mrs. Anna F. Harris.

(a) Importance of birth registration.

(b) The work and value of maternity centers.

(c) Relation of pre-school examination to the school child.

(d) Program of child health.

(e) Value of school examination.

(f) Organization of nutrition classes in schools.

(g) Value and scope of oral hygiene.

(h) Public health and the school child, by Dr. I. B. Krause.

School inspection and co-operation with the county health commissioner, by Dr. C. W. Green.

(a) Health legislation.

(b) The maternity problem.

(c) How may the various health agencies assist in co-ordinating the work of state and city departments of health and at the same time better standardize the work of private agencies.

(d) What are we doing and what can we do in health education, by Miss Blanche Renard.

(a) How best to present a public health appeal to a community.

(b) Community health organization, by Dr. Thomas Parron, Jr.

Immediately following the round table talk, Dr. Cortez F. Enloe, Health Commissioner of the State, will describe the state board of health program, and the chairman of the section on health, Dr. Jones, will summarize the recommendations growing out of the round table discussion.

On Tuesday at 9 a. m. there will be a round table discussion on subjects pertaining to mental hygiene and social hygiene. Dr. R. L. Russell will speak on "What Should Be Done With the Venereally Infected Delinquent, Male and Female?"

The full list of people to lead in discussing different topics in the round table on social hygiene and mental hygiene will include the leaders in this line of work in the state.

Physicians will be vitally interested in the visits to be paid to the social agencies of St. Joseph on Monday afternoon, and in the discussion of proposed plans to establish a co-operative council of all the health and social agencies that are doing work on a state-wide basis, so that they may carry out a unified program in each county.

NEWS NOTES

DR. EDWARD H. CLARK, of Kansas City, has accepted the position of Medical Referee in the Veterans' Bureau at Washington, D. C., and will act as diagnostician for the government.



"DISABLED SOLDIERS IN HOSPITALS."

THE management of St. John's Hospital at Joplin announce the purchase of 100 milligrams of radium. St. John's has recently installed both pathological and X-ray laboratories and made extensive improvements in fireproofing the building.

ST. JOHN'S HOSPITAL, St. Louis, has purchased a tract of ground 150x160 feet, giving the hospital control of an entire city block. It is contemplated to erect a building costing approximately \$500,000 as an addition to the hospital facilities. When the new building is completed, the total investment in buildings and grounds of the St. John's Hospital will be \$2,000,000.

TEACHING blind children the principles of hygiene and sanitation is an innovation recently begun at the Missouri School for the Blind, St. Louis. Health crusade charts are being put into Braille so the grade school children can take lessons in hygiene and sanitation during the present course. The system will be included in the high school course for the blind at a later period.

THE medical library of the late Dr. P. I. Leonard, of St. Joseph, has been donated to the medical department of the public library

by Mrs. Leonard, Dr. Leonard having expressed a wish before he died that such disposition of his medical books should be made. This will be a notable addition to the medical library in St. Joseph, for Dr. Leonard's collection represented about 1,200 volumes, it being one of the largest medical libraries in the city.

CONTRACTS have been let for the erection of the new building for the Missouri Pacific Hospital at St. Louis, and work was started in September. When fully completed and equipped the building will cost about \$850,000. The plant will consist of a main building of six stories to accommodate 270 white patients and a two-story annex with a capacity of 30 for negro patients. The new building will be located at Grand and Shaw Avenues and ready for occupancy in about fifteen months.

THE optometry law, passed by the last regular session of the General Assembly, does not affect physicians. Those physicians who have been examining eyes and fitting glasses, as well as dispensing the glasses, need not be exercised over the passage of the bill. Several members have written and asked information on this point. The optometry law specifically exempts physicians from its provisions. On the other hand, optometrists are not permitted under the law to treat diseases of any kind by fitting glasses.

DR. A. R. SNYDER, of Joplin, met with an almost fatal accident on the evening of October 3. Dr. Snyder had just left St. John's Hospital following a dinner given to the staff, and attempted to crank his car. The car had been left in gear and started forward knocking the doctor down, dragging him about thirty feet, and coming to a stop only when it collided with another car that was passing. It was necessary to jack up Dr. Snyder's car in order to extricate him. His right arm and three ribs were fractured.

FOR many years the Physicians' Casualty Association of Omaha has been paying sickness, accident and death benefits to physicians and their heirs at a premium cost far below the amount demanded by many insurance companies. The Physicians' Casualty Association is composed entirely of ethical practitioners who have founded their undertaking upon sound business principles, so that we have an instance which refutes the old saw that "Doctors are poor business men." If you are in the market for life, accident or health policies,

write this company for information and rates. You will find their advertisement on page XXII.

As a prophylaxis against blindness the state board of health has adopted a recommendation offered by Dr. E. P. North, president of the board, that a one per cent. solution of nitrate of silver be the standard solution approved by the board. This action was taken at the July meeting of the board, soon after the new law went into effect requiring physicians, nurses and midwives to drop in the eyes of new-born babies a prophylactic solution approved by the board. The board suggests that this solution be kept in ampules, or in amber colored bottles to prevent deterioration.

L. H. SCHWENKER and Edward A. Voight, two chiropractors at St. Louis, were convicted by juries for practicing medicine without a license October 17 and fined \$50 each. The St. Louis Health Department has begun an active campaign against these violators of the medical laws and expects to arrest and prosecute many more. It is said that Voight is a registered dentist but practices as a chiropractor. According to the testimony, he treated a boy for deafness and collected \$63.75 for services, but refunded the money when the father of the boy declared there had been no improvement in the hearing. Schwenker admitted that he practiced as a chiropractor and exhibited a diploma from a chiropractor school.

A GOOD physician is needed at Ohio, Mo., a small town in St. Clair County. The town is situated in a very prosperous farming district about ten miles from Appleton City and an equal distance from Clinton. The roads are good and the people well able to support a good physician. The death of Dr. Wm. E. Taylor, who practiced there for a number of years, makes an opening for some physician who is willing to practice in the country under conditions that are much more attractive than in many parts of the state. Any member desiring to investigate the location can obtain full information from Mr. H. H. Garey, Appleton City, or from Dr. J. R. Smith, Warsaw.

A BILL passed at the 51st General Assembly requires all text-books on physiology used in public schools to contain one or more chapters on dental hygiene, in order to convey knowledge to the pupils on the care and function of the teeth and their relation to the general health. These chapters must be edited

by a committee of five persons, three of whom shall be selected by the state dental association, one by the state board of health, and one by the superintendent of public schools. They must serve without compensation. The committee consists of the following: Dr. Franklin J. Murphy, Kansas City, representing the state board of health; Mr. E. M. Denny, representing the superintendent of public schools; Drs. V. R. McCue, Cameron; Jesse Miller, Maryville; W. Rice, Kansas City, representing the Missouri State Dental Association.

The law will become effective on July 1, 1922, and thereafter it will be a misdemeanor to use any other sort of text-book on physiology.

THE Southern Medical Association will hold its fifteenth annual meeting at Hot Springs, Ark., November 14-17, with the prospect of it being one of the best attended meetings in the history of the Association. Special rates for the round trip, on the certificate plan, have been granted by the railroads, but in order to secure this reduction in rate it is necessary for members of the Southern Medical Association to obtain a certificate from the business manager of that association, certifying that they are entitled to the reduced rate. This certificate must be shown to the ticket agent at the time of purchasing tickets. Those who intend to make the trip should write at once to the business manager of the Southern Medical Association, Birmingham, Ala., for a certificate. It is said the program of the meeting will contain about 200 papers, divided into numerous sections. The Hot Springs physicians are making unusual preparations for the entertainment of the physicians and all members are urged to bring their families.

ONE of the most important developments in the medical history of the past five years has been the work of the Council on Pharmacy and Chemistry of the American Medical Association. Their examination and analysis of newer remedies has done much to advance the standard of manufacturing pharmacy; it is safeguarding the doctor against inferior products and indicating those for which misleading claims are made. The co-operation of the physician in using and prescribing Council-passed products is making this work more effective each year. The co-operation of the manufacturers is also an encouraging recognition of the value of this service. In this issue the Abbott Laboratories, Chicago, have renewed their advertising contract with our JOURNAL, after a suspension of several months, and they call attention to a partial list of their

articles which have been approved by the Council. These articles are obtainable on prescription at leading pharmacies, or they may be obtained direct from the company. See their advertisement on page VIII.

NATURE has nowhere been so prodigal in providing ideal conditions for the spawning, feeding and development of the true *Gadus Morrhue* than in the waters surrounding the far-famed Lofoten Islands, Norway. For a century or more, cod-liver oil has been recognized as a dependable and easily absorbed nutrient and more recent investigations reveal that it is an exceedingly fruitful source of the anti-rachitic vitamins. Cod-liver oil is as delicate as butter and in the selection and processing of the livers should receive as much care as science has thrown around the production of pure milk. It must be made right from the start! For nearly half a century, Scott & Bowne, the producers of the "S & B Process" clear Norwegian cod-liver oil, have specialized upon the product of the livers of the true *Gadus Morrhue*. The "S & B Process" is the only cod-liver oil made in Norway and refined in America. This oil is a 100 per cent. product of the livers of the true *Gadus Morrhue* and is free from admixture with other oils or impurities. See their advertisement on page VIII.

THE Southern Medical Association holds its next annual session at Hot Springs, Arkansas, November 14-17, and will undoubtedly attract a large number of Missouri physicians. The officers of the section of neurology and psychiatry which holds its first scientific session at the coming meeting request publication of its program. It follows:

PSYCHIATRY

Part I

A Symposium on Early Detection of Mental Disorder.

An Evaluation of Intelligence Tests, invited guest, Professor Fletcher of Tulane University and Sophie Newcomb College.

Early Recognition of Mental Disease, Dr. Roy M. Chapman, Sheppard and Enoch Pratt Hospital, Towson, Md.

Psychoneuroses in Their Incipency, Dr. Sidney Schwab, St. Louis.

Early Manifestations of Psychoneuroses, Dr. Louis E. Bisch, Asheville, N. C.

Discussion opened by Dr. Bondurant, Mobile, and Dr. Somerville, Memphis, Dr. S. Roberts, Atlanta, and Dr. Bliss, St. Louis.

Psychoneuroses in Public Health Hospitals,

Dr. Benton, Miami, Florida, U. S. P. H. S. Hospital.

Discussion: Dr. W. W. Graves, St. Louis, and others.

NEUROLOGY

Part II

Chairman's Address: The Treating of Neurology, Psychiatry and Psychopathology, and Their Relation to General Medicine and Other Specialties, Especially the Eye, Ear, Children, Orthopedic, Gastroenterology and Genitourinary Diseases.

The Pathology of Pellagra: From Clinical and Neuropsychiatric Aspects, Dr. W. M. Bevis, U. S. P. H. S. Hospital, Augusta, Ga.

Discussion: Dr. R. N. Greene, Jacksonville, Fla., Dr. E. P. Bledsoe, U. S. P. H. S.

Muscular Atrophies and Dystrophies Contrasted with Emaciation, Dr. Beverly Tucker, Richmond, Va.

Discussion: Dr. W. W. Graves, St. Louis, Dr. Sidney Schwab, St. Louis.

Presentation of a Patient with Progressive Lenticular Degeneration, Dr. M. L. Graves, Galveston, Texas.

A Peculiar Case of Hysteria, Dr. E. Bates Block, Atlanta, Ga.

Discussion: Dr. Sidney Schwab, St. Louis, and Dr. Houston, Augusta, Ga.

MEMBERSHIP CHANGES, OCTOBER, 1921

NEW MEMBERS

Blanford, David I., 3908 Bell St., Kansas City.

Maddox, Jesse, Moberly.

Nicholas, W. H., Brighton.

Reser, Washington O., Stover.

DECEASED

Haley, Oba, Fredericktown.

Isley, Jos. P., Polo.

Potter, Wm. A., St. Louis.

Shuttee, Henry C., Westplains.

THE FOLLOWING MEMBERS HAVE MOVED

Abrams, S. F., Wall Bldg., St. Louis, to 519 University Club Bldg.

Althaus, Carl J., 5803 Easton Ave., St. Louis, to 3405 Pestalozzi St.

Bedal, A. C., 4254 Lindell Ave., St. Louis, to 3309 S. 13th St.

Bellinger, J. F., 2651 Armand Pl., St. Louis, to 2657 Accomac St.

Callaghan, R., 647 Elmwood St., Kansas City, to 5111 Independence Ave.

Chaffin, E. B., Iowa City, Iowa, to Fulton, Mo.

Davis, C. B., Nevada, to 2602 E. 31st St., Kansas City.

Earnest, C. E., Clay Center, Kansas, to 917 Rialto Bldg., Kansas City.

Ebel, J. A., City Hospital, St. Louis, to Mo. Pacific Hospital.

Edler, Wm., Los Angeles, Calif., to Tacoma, Washington.

Elders, F. A., Hayti, to Flat River.

Elliott, J. R., 405 Waldheim Bldg., Kansas City, to 713 Lathrop Bldg.

Flader, O. F., 4004 Chouteau Ave., St. Louis, to Chouteau Trust Bldg.

Foster, H. M., Mo. Pacific Hospital, St. Louis, to 4065 St. Louis Ave.

Gay, L. P., Barnes Hospital, St. Louis, to 423 University Club Bldg.

Geistweit, Wm. H., Jr., 104 E. 8th St., New York City, to San Diego, Calif.

Gradwohl, R. B. H., 928 N. Grand Ave., St. Louis, to 3514 Lucas Ave.

Green, B. L., 800 Chestnut St., St. Louis, to 5630 Delmar Blvd.

Harrison, A. W., Knobnoster, to Warrensburg.

Hein, E. E., 3837 Utah Pl., St. Louis, to 715 University Club Bldg.

Kirkwood, E. E., Moberly, to Kirkwood.

Koessel, A. W., 3717a McDonald Ave., St. Louis, to 2915a Shenandoah Ave.

Langan, Wm. J., Lister Bldg., St. Louis, to 317 Metropolitan Bldg.

Major, Hermon S., Fulton, to 3100 Euclid Ave., Kansas City.

Morrison, L. J. G., Lawrenceburg, to Halltown.

Ochsner, E. W., St. Louis, to 2043 Cleveland Ave., Chicago, Ill.

Punton, John, Pasadena, Calif., to 1014 Wyandotte St., Kansas City.

Raithel, G. H., 4014 DeTonty St., St. Louis, to University Club Bldg.

Reilly, J. J., Fitzsimmons General Hospital, Denver, Colo., to 952 10th St.

Ritchie, F. R., 5230 Waterman Ave., St. Louis, to 5833 Waterman Ave.

Rudolph, R. W., Barnes Hospital, St. Louis, to 2043 Cleveland Ave., Chicago, Ill.

Sharp, Wm. L., 2910 Kossuth Ave., St. Louis, to 4280 Washington Ave.

Sievers, E. F., 4548a McMillan Ave., St. Louis, to City Hospital.

Tate, P. S., 5131 Minerva Ave., St. Louis, to 5007a Vernon Ave.

Underwood, R. H., Kansas City, to 5520 Pershing Ave., St. Louis.

Willman, Reinhold, 409½ Illinois St., St. Joseph, to 301 N. 11th St.

Withers, S. M., St. Louis, to Denver, Colo.

Young, J. H., Young Bldg., Ozark, to Ponce de Leon.

THE FOLLOWING ARE NO LONGER MEMBERS

Albright, F. C., Garland, Kansas.

Armstrong, C. L., Boise, Idaho.

Beall, A. G. Hutchinson, Kansas.

Bowers, Jos. S., Red Fork, Oklahoma.

Buchanan, J. M., West Tulsa, Oklahoma.

Byrd, Chas. F., R. F. D. No. 6, St. Joseph.

Carroll, F. W., 219 North 3rd St., St. Joseph.

Dallwig, E. L., Milwaukee, Wisconsin.

Dove, Jos. D., St. Ansgar, Iowa.

Ewing, F. C., Alexandria, Louisiana.

Farris, H. L., Paris, Texas.

Higdon, E. F., 118½ North 8th St., St. Joseph.

Hosher, John C., Rosendale.

Hoxsey, T. T., Minden, Iowa.

Hynes, Jos. C., San Diego, Calif.

Jefferies, C. O., Savannah.

Joiner, G. W., Hollister, Okla.

Kangisser, Julius, 210 Logan Bldg., St. Joseph.

Meyers, H. A., 503 Security Bldg., Davenport, Iowa.

Pope, A. E., 127 Winter St., Fall River, Mass.

Roney, Wm., Marysville, Kan.

Rothman, H. L., 1411 Franklin Ave., St. Louis.

Skinner, Phineas, 43 E. Hyde Park Ave., St. Joseph.

Van Arsdall, E. P., C., B. & Q. R. R. Offices, Beardstown, Illinois.

Wiles, Wm. T., Bakersfield.

RESIGNED

Chesney, A. M., Barnes Hospital, St. Louis.

OBITUARY

PIERRE ISIDORE LEONARD, M.D.

Dr. P. I. Leonard, of St. Joseph, one of the best known physicians in the state, died at his home on September 12, 1921, after an illness of several weeks, aged 59 years. Dr. Leonard was a native of Luxemburg, where he received his early education. When 17 years of age his parents moved to this country and settled at St. Joseph where Dr. Leonard entered the office of the late Dr. T. H. Doyle and "read medicine," as medical students did in those days. He matriculated in the Ens-worth Medical College from which he graduated in 1884 and then he entered Bellevue Hospital Medical College and received a diploma from that institute in 1885. He practiced in St. Joseph until 1889 when he went abroad and studied diseases of the eye, nose and throat in the European clinics, returning

home to devote his entire time to these conditions. He soon became a leading factor in the profession and held a high place in the esteem and confidence of his confreres and of the public. He was thoroughly in sympathy with the purposes of organized medicine and took an active part in the affairs of the Buchanan Medical Society, being twice elected president of that body and holding places on various committees of the State Association. He was a contributor to the literature of his specialty and associate editor of the *Medical Herald*, and a member of the teaching faculty of the Ensworth Medical College for a number of years before it closed its doors in 1914. In addition to his activities in the medical society, he was deeply interested in the community welfare and was elected councilman of St. Joseph for two years, 1906-1908. During the world war he was commissioned a captain in the Medical Corp of the Army. He was a Fellow of the Medical Association and a member of special societies. The Buchanan County Medical Society at its meeting held on October 5, 1921, adopted the following resolutions in memory of their deceased member:

WHEREAS, An All-Wise Power has removed from us Dr. P. E. Leonard, a physician of scholarly attainments and an oculist of great reputation and skill, and

WHEREAS, He was a much valued medical society worker and a champion of honest and ethical conduct and was very courageous in combating influences which might tend toward deterioration, and

WHEREAS, As a citizen he gave freely of his time and resources for the betterment of his community, therefore, be it

Resolved, That the Buchanan County Medical Society wishes to testify to the worth and achievements of our departed scientific brother and to bear witness before our fellow-men to his uprightness, his scientific worth and his dependability as a citizen. We feel that at fifty-nine years he was at his prime and that his community and his family have been deprived of much which he would have bestowed upon them; and be it further

Resolved, That we spread on our records and publish these resolutions and send to his family this tribute of our respect to his memory, saying in conclusion that if his time was brief, yet the direction of his aim was true always.

WILLIAM ADVANCE POTTER, M.D.

Dr. W. A. Potter was born in West Newton, Ohio, September 17, 1870, and came with his parents, Dr. B. B. Potter and wife, to Lancaster, Mo., while yet a child. Here he grew up, finishing the public schools at Lancaster and graduating in medicine from the College of Physicians and Surgeons of St. Louis in 1892, and also from the Marion-Sims Medical College. He then took post-graduate work in Chicago. He had been a member of the Schuyler County Medical Society and the Missouri State Medical Association since 1911,

and was active in society work as well as true to the principles of reputable medicine. He volunteered his services in the late war and was commissioned a Captain, being stationed at Camp Grant, Rockford, Illinois, in 1917. After the war he located at St. Louis and specialized in diseases of the ear, nose and throat, where he was in charge of the Jewish Hospital clinic, and the clinic of the St. Louis University School of Medicine. He died at the Deaconess Hospital in St. Louis from pneumonia after a short illness, September 22, 1921, and was buried at Lancaster, Mo., September 25.

J. B. BRIDGES, M.D.

OBA HALEY, M.D.

Dr. O. Haley, of Fredericktown, a graduate of the Missouri Medical College, 1879, died at his home on September 20, 1921, aged 75 years. For thirty-six years Dr. Haley practiced in Fredericktown and was well known over a large section of the southeastern part of the state and universally admired and respected for his genial disposition and his devotion to his friends and patients. He was a member of the Madison County Medical Society and the State Medical Association.

WILBUR F. BUREN, M.D.

Dr. W. F. Buren, of Princeton, one of the earliest settlers in Mercer County and for very many years a leading physician in that section of the state, died at his home on August 22, 1921, aged 80 years. Dr. Buren was a graduate of the Keokuk, Iowa, Medical College, he being one of the first physicians in North Missouri to have a diploma from a regularly established medical school. He was a member of our Association for a number of years, but advanced age compelled him to retire from practice and participation in medical society work. Among the surviving members of his family is Dr. Charles R. Buren, of Princeton, a member of Mercer County Medical Society.

LLOYD HENRY BRANNON, M.D.

Dr. L. H. Brannon, of Hayti, a graduate of the St. Louis College of Physicians and Surgeons, 1915, died in a hospital at Memphis, Tennessee, on September 15, 1921, from gunshot wounds, aged 36 years. Dr. Brannon practiced in St. Louis for a short period after his graduation, then moved to Oklahoma and about four years ago located in Hayti. He became well established in his profession and also took an active part in local politics,

being elected mayor of the city for one term. He was a member of the Pemiscot County Medical Society, the State Medical Association, and a fellow of the American Medical Association.

JOSEPH P. ISLEY, M.D.

Dr. J. P. Isley, of Polo, a graduate of the Eclectic Medical University of Kansas City, 1906, died very suddenly while in a drug store at Polo, September 1, 1921, aged 44 years. For a number of years Dr. Isley practiced at Kansas City but has been a resident of Polo for the past two years. He was a member of Caldwell County Medical Society and State Medical Association.

CORRESPONDENCE

TITLE-PAGE DATES VERSUS COPYRIGHT DATES

St. Louis, Oct. 5, 1921.

TO THE EDITOR:

Under our laws he who first sends to the Librarian of Congress two printed or typewritten copies of the title-page of a proposed publication, accompanied by the legal fee, is granted the copyright, no matter whether he be, or be not, the author of the proposed publication. It is left to the courts to decide, in cases of alleged fraud, who is the real owner. It is a case of the one being served first who comes first. Perhaps this is the appropriate, as it is the expeditious, way of handling a vast amount of business. The aggrieved party has a show for justice.

But what is the status of an author who, having permitted his publisher to obtain the copyright, finds that the child of his (the author's) brain has been placed in the class of illegitimates? Suppose, for example, that a well-known medical book was last revised and printed in the year 1916; suppose that, five years later, a sharp publisher, having on hand a few copies, and desiring to sell them quickly, should bind the printed sheets and should place in the volume a title-page dated 1921—what recourse does the author have? The glib salesman can tell the prospective buyer that "this is the last edition." Of course, it is; for the author has not yet forwarded the manuscript for the new one.

What recourse has the author? None! His best friends, ignorant of the facts, may revile him. They may cast queer looks in his direction. Or, if they live in other cities, they may write him letters so full of sulphur and

phosphorus that the recipient wonders they do not burn the mail bags.

What can the poor devil do? Only this: try to smile—(risus sardonicus)—and he can do one thing more, viz.: he can tell members of his profession never to buy a book on the strength of the date printed on the title-page, for it is only the *copyright* date that counts. That is the legal and actual date of the year of publication.

The old-time printers were honest gentlemen. For example, in his library the writer has a huge volume whose last page states (in Latin) that this book was finished on the 12th day of August, in the year 1510. It is a shame that authors should be humiliated by the sharp practices of publishers. It is deeply to be regretted that publishers who obtain money by false pretenses are not now inhabiting that sphere of great activity but of limited bounds where "big ones are broken into little ones."

JAMES MOORES BALL.

MISCELLANY

HEALTH EXHIBIT AT STATE FAIR

August 8-20, 1921

Child Hygiene Demonstrations

In an endeavor to gain greater co-operation and arouse public opinion and interest among the people of Missouri in the health of the child, a demonstration of the activities of the Division of Child Hygiene, Missouri State Board of Health, in co-operation with the U. S. Public Health Service, was held in the Health Tent at the State Fair at Sedalia, August 8-20, 1921.

An effort was made to interest the people who attended the Fair on the important functions of the division, using living exhibits in every display. The several phases which were represented at the exhibit were as follows:

(a) *Infant Welfare Clinic*.—Demonstrations were given in the proper method of bathing, dressing and general care of the baby. The exhibit on this work consisted of a Chase doll properly dressed and a complete baby layette consisting of the following:

Three shirts, cotton and wool or silk and wool.
Three abdominal bands, 8 inches wide and 18 inches long.

Three flannel skirts, Gertrude style.

Three night gowns or kimonos of cotton flannel.

Six cotton slips or dresses.

Three dozen diapers.

Two light weight blankets.

One coat or cape for outdoor wear.

One bonnet.

Boric acid.

Talcum powder.

Pure soap.

Soft towels and wash cloths.

Small bottle of olive oil.

Small roll of sterile gauze.

Assorted safety pins.

(b) *Preschool Clinic*.—To prepare the child for

its school career an attempt was made to show the parents and to influence the children in health habits and the value of proper food and exercise during the space of time intervening between infancy and school age. Further effort was made to show the urgent necessity for the physical examination of all children that the physical defects might be discovered early in the child's life and corrected before entering school, thus enabling him to obtain the most out of his future mental training. The exhibit of this work consisted of attractive posters emphasizing the following:

1. Milk must be pasteurized.
2. Drinking as much milk as possible, but no coffee or tea.
3. A full bath more than once a week.
4. Brushing the teeth at least once a day.
5. Sleeping long hours with windows open.
6. Eating some vegetables or fruit every day.
7. Drinking at least four glasses of water a day.
8. Playing part of every day out of doors.
9. A bowel movement every day.
10. What is health?

(c) *Weighing and Measuring*.—Every child who entered the Health Tent was weighed and measured. A record card was given the child showing its exact height and weight and also what its normal weight should be. Attempt was made to impress upon the child the significance and the desirability of making the normal gain in weight. The regular weighing and measuring of the child indicates, first, the general condition of health and, second, whether, in comparison with previous records, there has been any improvement. The child who is chronically 7 per cent. under weight for his height is retarded practically one year in both weight and height. Such stunted children are not only undernourished but malnourished. The weighing and measuring was for the purpose of identifying this group. It was suggested to the parents that they should have their children weighed and measured at least twice a year. This work was done by representatives of the American Red Cross.

(d) *Physical Examination of School Children*.—For the purpose of giving examination to those desirous of having the physical examination made, the U. S. Public Health Service provided a corps of doctors and nurses. The physicians did not only make the complete physical examination but instructed the parents with reference to the diagnosis and advised them to have their children examined by the family physician that definite correction might be made, but also went into the case of the indulgent child and the child with chronic constipation who needed special instruction as to proper diet and exercise and the conscientious child who obtained too little sleep because he was staying up too late to do his home study. Two hundred children were given physical examination.

(e) *Nutrition*.—All height and weight records were computed so that the child who was 7 per cent. or more under weight was referred to the nutritional clinic conducted by nutrition specialists from the Missouri University in co-operation with the Division of Child Hygiene. Attempt was made to ascertain the history of improper food habits, of over-fatigue and errors of home and school life. Instructions for proper mixed diet were given to each child who attended the nutrition clinic.

(f) *Exhibit*.—To impress the value of proper diet in the minds of the children and also the parents, a series of white rats were shown:

- Cage One. A rat fed on proper balanced diet.
 - Cage Two. A rat fed on excess sugar.
 - Cage Three. A rat fed on excess coffee.
- Explanation was made to show why Rat No. 1

appeared more healthy than the other two, thus showing the detrimental effect of excessive sugar and coffee in diet.

(f) *Educational*.—Educational workers and demonstrators included representatives from the Missouri Tuberculosis Association, and Parent-Teachers' Association. Special emphasis was made during the Fair to impress the value of birth registration in order that Missouri might be placed in the area of Birth Registration in the United States. A Poster Exhibit was shown on some of the reasons for birth registration and also its value to individuals:

1. It is required by law.
2. Citizenship: It is the right of every child born to have the fact of its citizenship made a matter of official record.
3. Right to attend school: School attendance is dependent upon age, and a child should be armed with a proper certificate of birth to prove that he is legally entitled to enter school.
4. Right to vote: If a voter is challenged at the polls for legal proof of his age, the copy of a birth record is unquestionable proof of his rights.
5. Right to hold public office: The law states the age requirements for certain offices, and Civil Service Commissions also set limits for examinations for office. The simplest and most valuable proof of eligibility as an office holder is a birth certificate.
6. Right to military service.
7. Right to be married.
8. Right to foreign travel.
9. Right to inherit property, as a proof of heirship.
10. Its value to state and society.

Mrs. Walter McNab Miller, of the Missouri Tuberculosis Association, did splendid work in health education in distributing a large amount of excellent literature. The children enjoyed turning the "Health Wheel" that taught a valuable lesson at each stop of the wheel and the lesson emphasized by the gift of an attractive booklet. The most impressive feature of this work was portrayed in the two Modern Health Crusade plays that were given by the school children of Huntsville and Warrensburg. The children of each school showed careful training and a thorough understanding of the lessons they were imparting to the public. Every department of the Public Health Service and the Division of Child Hygiene was strengthened and new impetus added through these well-staged plays of our school children and the other features of work by Mrs. Miller and her assistants.

During the twelve days at the Fair, the Child Hygiene Exhibit was visited by approximately 6,000 interested persons. Special attention was given to the educational public health literature distributed to suit the individual need. Each mother was also given a book dealing with the feeding, care and clothing of the child.

To further the interest of child hygiene activities in the State of Missouri, the State Fair Commission, the Governor and Lieutenant-Governor agreed to have a three-day contest for judging the most perfect child. The Governor's loving cup for the highest scoring baby girl was awarded to Marcella A. Carrigan and Marca C. Carrigan, twins, of Pacific, Mo. The Lieutenant-Governor's loving cup for the highest scoring baby boy was awarded to Frederick L. Finks, of Schell City, Mo.

Publicity was given to this contest and entrance blanks were mailed to all those requesting the privilege of entering their child in the contest. During the three days of the contest each child entered was given a thorough mental and physical examination

and the records were made on the standard score card issued by the American Medical Association. These cards were turned over to the scoring committee who checked each card separately. The general scoring was reviewed by the judges.

Most valuable assistance was given by the following agencies to further the interest in Child Hygiene in the State of Missouri: U. S. Public Health Service, American Red Cross, International Health Board, Missouri Tuberculosis Association, Missouri State Medical Association, University of Missouri, Parent-Teachers' Association, W. C. T. U., Greene County Health Association.

Venereal Diseases

The Department of Venereal Diseases of the State Board of Health displayed the boys "Keeping Fit" and the girls "Youth and Life" card exhibits on a metal floor stand, and the "Venereal Menace" and the "Negro Keeping Fit" was displayed on another floor stand.

A lantern slide and a motion picture machine were furnished by the Missouri State Medical Association.

The "Keeping Fit" lantern slides were shown to the State Fair Boys' Club, which is made up of a delegate from each county in the state of a boy about sixteen years of age.

The two-reel motion picture, "Venereal Disease Lecture Film of Animated Diagrams," was shown to about one thousand men of the National Guard of Missouri, and a pamphlet was distributed to each man. The First Infantry, a St. Louis organization, did not report and arrangements were made to show this film to the entire regiment at their Armory in St. Louis in October.

This department made every effort possible to prevent venereal infection of the men in the National Guard, there being approximately three thousand men in camp from August 8 to 20. On August 8 the police brought in forty-seven prostitutes, nearly all of whom had come from Kansas City or St. Louis to ply their trade during the State Fair. These prostitutes were examined in our venereal disease clinic at Sedalia and eighteen of them were found to have active gonorrheal infection. Later the Wassermann report showed eleven had four-plus. There being no means of detention for those who were infected, they were informed that they must return to the clinic each day. The co-operation was good although a number of them left town.

The chief medical officers detailed two men each night at the clinic, and it was kept open all night for a prophylactic station. Very few of the soldiers took advantage of this service.

It is estimated that six thousand persons passed through the board of health tent and were interested in the exhibit.

IN WHAT CASES DO UTERINE FIBROIDS STILL REQUIRE OPERATIVE REMOVAL?—The points emphasized by Fred J. Taussig, St. Louis (*Journal A. M. A.*, July 30, 1921) are: Radiotherapy of fibroid tumors is destined more and more to displace operation as patients learn to come early before contraindications to its use have arisen. In the negro, however, surgery will still have to be generally employed in fibroid tumors on account of their earlier, more rapid and more complicated development. Radiotherapy is a measure that has definite contraindications and the selection of cases suitable for such treatment should remain in the hands of the trained gynecologist.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
Webster County Medical Society, Dec. 18, 1920.
Livingston County Medical Society, Dec. 27, 1920.
Montgomery County Medical Society, Jan. 6, 1921.
Chariton County Medical Society, Jan. 7, 1921.
Clinton County Medical Society, Jan. 8, 1921.
Oregon County Medical Society, Jan. 22, 1921.
Reynolds County Medical Society, Jan. 29, 1921.
Benton County Medical Society, Feb. 3, 1921.
Ralls County Medical Society, Feb. 14, 1921.
Schuyler County Medical Society, Feb. 28, 1921.
Adair County Medical Society, Mar. 11, 1921.
Camden County Medical Society, Mar. 17, 1921.
Pulaski County Medical Society, Mar. 22, 1921.
Atchison County Medical Society, Mar. 23, 1921.
Putnam County Medical Society, Aug. 16, 1921.
Laclede County Medical Society, Sept. 7, 1921.
Randolph County Medical Society, Sept. 8, 1921.
Scott County Medical Society, Oct. 15, 1921.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-eighth Meeting, April 11, 1921

1. PRESENTATION OF CASES.

A. TWO CASES OF NEPHRITIS.—By DR. TERRILL.

E. O., male, æt 17. *F. H.* and *P. H.* unimportant. Entered hospital March 11, 1921, following tonsillectomy ten days before. Three days after operation had fever and headache and vomited. Fever and vomiting persisted; temperature to 101 degrees. Became drowsy and very thirsty, taking much water but not retaining it. Eruption in inguinal region appeared day before admission.

Physical Examination.—A well nourished boy, drowsy, apathetic, mentally clear when aroused, complaining slightly of sore throat, pharynx filled with purulent secretion, tonsil beds healing. Heart negative. Small area of impaired P. N. with a few moist rales low in axilla. Reddish maculo-papular eruption confined to inguinal region; in places lesion confluent; slight itching. Urine showed a trace of albumin and a few w. b. c. and granular casts. W. B. C., 28,700. Temperature, 101 degrees rectal.

Patient was given a small amount of liquids at frequent intervals and vomiting soon ceased. Drowsiness persisted. A pericardial friction rub developed, disappearing in a few days. The signs at the left base, including X-ray, became typical of a limited bronchopneumonia. The skin eruption spread to abdomen, wrists, and then to back and chest, finally becoming generalized, then assuming an urticarial nature, with intense itching. At the same time signs of an acute nephritis developed with r. b. c. and epithelial casts. Urine, 900 to 1,500 c.c. in two hours. N. P. N. (non-protein-nitrogen) of blood showed 210 mg. per 100 c.c. During the height of eruption this rose to 284 mg. P. S. P., a trace in two hours. The fever persisted between 99 and 101. The w. b. c. rose rapidly and on the fifth day reached 65,000. From this time there was a gradual subsidence of all symptoms up to a period of some two weeks during which time the nephritis cleared up

entirely, the P. S. P. at this time being 57 per cent. and the N. P. N. 27.5 mg.

Blood pressure ranged from 110 to 130 throughout course. The eruption disappeared followed by a slight desquamation.

Patient was discharged April 6, 1921.

The final diagnoses were:

Erythema multiforme.

Nephritis, acute.

Bronchopneumonia, left base.

Pericarditis, fibrinous.

B. CASE II.

H. B., farmer, at 38. Entered hospital March 8, 1921, complaining of vomiting with some epigastric pain present at intervals for past four years.

F. H. and P. H. unimportant. P. I. Onset with attacks of cramps relieved by vomiting which at first was induced. Attacks at regular intervals, usually several weeks apart, lasting several days. Severe attack of vomiting in 1920 lasting four days. Vomiting usually 1 to 3 hours after meals, sour, no hematemesis. Has recognized food eaten several days before.

Physical examination showed a fair nutrition, but skin somewhat dry. Head, heart and lungs essentially negative. Abdomen, scaphoid, bulging in left. Epigastrium, visible peristalsis. There was some evidence of tetany as indicated by a positive Chvostek sign. Stomach contents dark brown with foul odor. Many yeast moulds and Oppler-Boas bacilli. Free HCl, 26. Total 60. X-ray showed pyloric obstruction probably due to duodenal ulcer. Blood and urine negative at entrance but two days later showed a trace of albumin and a few granular casts. P. S. P., 27 per cent. in two hours.

Patient rapidly developed an acute nephritis with r. b. c., epithelial and granular casts in urine; amount 1,000 to 2,500 c.c. in 24 hours. N. P. N., on March 15, 166 mg. per 100 c.c. of blood, rising three days later to 173 and P. S. P., falling to a trace in two hours. By March 19 the N. P. N. began to fall and the P. S. P. to increase, reaching normal.

Under the usual routine treatment for acute nephritis fluids were given by protoclysis and in small amounts by mouth, followed by daily gastric lavage.

The patient's condition improved rapidly under this treatment and the evidence of pyloric obstruction diminished. He was transferred to the surgical service April 8 for operation where an old duodenal ulcer was found and gastric enterostomy performed. He was discharged April 23 much improved.

C. CASE OF TUBERCULOUS POLY-SEROSITIS.—By DR. JOSTES.

Colored male, age 21, laborer. Chief complaint, swelling in abdomen, shortness of breath.

Present Illness.—Onset February, 1921, with lassitude, weakness and poor appetite. On March 3, 1921, he noticed increase in the size of the abdomen and was constipated at the same time. He has been feverish and brings up thick, yellow sputum. He rests better on left side, and has shortness of breath and pain in chest when sleeping on right side.

Physical Examination.—Tongue heavily coated. Signs of fluid in left chest up to second rib. Abdomen markedly distended. Shifting dullness in the flanks. No palpable masses.

March 18, 1921. Thoracentesis. 700 c.c. turbid, reddish-brown fluid. Specific gravity 1,020. Cells 5,960; Lymphocytes predominating.

April 1, 1921. Thoracentesis. 150 c.c. similar fluid removed. No tubercle bacilli found.

A guinea pig inoculated with fluid from the chest developed tubercles in the abdominal organs.

DISCUSSION

Dr. Dock: This case brings up an important point in regard to the treatment of tuberculosis of the peritoneum. I shall not discuss the surgical treatment because this is not what I would consider an ideal case for that sort of treatment. In discussions on such cases very often surgical treatment is rejected and the patient told that general treatment will be very much better. If we follow up such cases, we very often find that the so-called general treatment consists chiefly of neglect. Everybody knows what the treatment of a patient with tuberculosis should be, but the numerous details that have to be carried out so minutely are not carried out, and so the results are often bad. So, if one advises against operation, it would seem to be his duty to point out exactly what must be done and the physician who undertakes treatment of such a case will not be doing his duty unless he carries out the necessary measures as painstakingly as a surgeon would in case the patient came to operation. Of course, the medical work is very much more protracted, but unless it is completely carried out, it is useless to compare the results with those obtained by more radical measures.

D. A CASE OF CECOSTOMY FOR SEVERE COLITIS.—By DR. GRAHAM.

This man is 58 years old, who has had diarrhea for four years. He began to have severe abdominal pain nearly constant in nature during the summer of 1920. This pain has been chiefly in the lower abdomen. He has not been able to work since August 1, 1920.

Admitted to the hospital on October 4, 1920, at which time he was having about five stools daily. On examination a large mass was found to occupy the central portion of lower abdomen which was firm and nearly spherical. X-ray examination showed absence of haustration of transverse and descending colon. No diverticula noted. Large mass was noted by X-ray pushing colon upwards. This mass seemed to arise in pelvis and was about the size of the uterus at the fifth month of pregnancy. Examination of the stools showed no parasites and nothing to account for his colitis. Exploratory operation done October 8. The large tumor was found to consist of extensive deposit of fat around rectum, descending and ascending colon. This accumulation of fat was so enormous that the bowel itself could scarcely be recognized. The case was considered to be perhaps multiple diverticulitis of the colon. Resection considered inadvisable because of extent of involvement and fact that patient was not in very good condition. Resection would have necessitated the removal of entire colon in addition to rectum. The cecum was therefore drawn out through a new incision on the right side and the abdomen was closed. Three days later the cecum was opened to establish a cecostomy. He re-entered the hospital April 5 to report for examination and observation. He has gained 50 pounds in weight, is free from pain, and feels better than he has for years.

We feel that this case is probably one of severe colitis rather than diverticulitis. No diverticula have ever been demonstrated either with the X-ray or the sigmoidoscope. We feel also that he has not yet received the maximum benefit from his cecostomy and we have therefore advised him to return home and wait for another six months or more before having it closed. His cecostomy has given him very little trouble. He does not control his bowel move-

ments through the cecostomy opening but he wears a colostomy cup which is cleaned twice a day and he says that he never notices any objectionable odor. The case illustrates the beneficial results of such a procedure in a case of severe colitis.

E. CARCINOMA OF THE ESOPHAGUS.

By MR. KAHN.

Male, white, age 52. *Diagnosis*, cancer of esophagus with perforation into right bronchus.

Came to O. P. D. with chief complaint, unable to swallow food.

F. H.—Father died of cancer, gastric, at 60.

P. H.—Pneumonia or pleurisy or both in 1918.

P. I.—February 20 the patient noticed that food did not pass easily into the stomach. There was pain on swallowing and loss of weight. Symptoms have become worse.

Gastrointestinal fluoroscopic examination disclosed moderate high grade obstruction and dilatation of esophagus.

He was given radium treatment two times. Condition improved so as to be able to retain soft foods. Four months later deglutition was not so good, also at that time he had pain in the right mid-sternal and pectoral regions. Few days after this he was unable to take solids or liquids for 24 hours. On X-ray examination bismuth seemed to illuminate bronchi. Gastrostomy was done a week later. X-ray examination one month later showed barium in right bronchus. Three weeks later no barium was seen to enter bronchus but patient coughed immediately after injection. (Evidently attempting to rid bronchi of fluid.)

Re-entered hospital at this time with signs of abscess in right lung, upper. X-ray showed shadow in this region. After long stay in hospital was allowed to return home not improved.

DISCUSSION

Dr. Graham: Mr. Kahn has neglected to mention that a gastrostomy was performed and the patient still has the tube.

Dr. Dock: This case illustrates an important change in the examination of cases of esophageal obstructions. The probes formerly used are out of place. A soft tube may be used for special purposes such as washing out the esophagus to lessen irritation, but the X-ray examination is not only more useful but also safer than other methods of demonstrating the seat and probable nature of this obstruction.

2. A MORE ACCURATE METHOD OF DETERMINING THE EARLY RECOVERY OF A DEGENERATED NERVE WITH REPORT OF CLINICAL AND EXPERIMENTAL DATA.—By E. SACHS, LINDBY PYLE, and J. M. MALONE.

The various clinical methods to determine whether a nerve is recovering or not have been rather crude, too technical or too time consuming to be of practical use. It occurred to us that studying experimental nerve lesions in animals and peripheral nerve lesions clinically might develop a more accurate and practical method.

The electrical phenomena exhibited by muscles and nerves for our purposes may be summed up in the conception of their excitation time. The excitation time is based on two factors, (1) the *minimal strength*, (2) *minimal duration* of a constant current, i. e., a current which reaches a certain voltage immediately and maintains this voltage as long

as it is flowing. If one stimulates a nerve muscle preparation with a constant current it is found that the contraction of the muscle is dependent not only upon the strength of the current but also upon its duration. No matter how strong the current is, that is, the voltage, the current must flow a certain length of time in order to get a contraction and if this is shortened no reaction follows. Conversely, no matter how long the current flows, if the current is not more than a certain strength, no contraction of the muscle will be obtained. Between these extremes as the duration of the current is decreased the strength of the current must be increased to produce a contraction, and vice versa, the duration has to be increased as the strength is decreased. The minimum duration of a current, no matter how strong, necessary to stimulate a muscle without nerve supply is much longer than that necessary to stimulate a muscle with an intact nerve.

We feel that the true minimum duration of current, no matter how strong the current, is the real measure of the excitation time of the tissues rather than arbitrary chronaxie because chronaxie may be found to be only of the muscle time while if the minimum duration with a stronger current is tested, a much shorter time may be found. This would indicate the presence of nerves to these muscles which ultimately showed recovery.

We prefer to use the terms "muscle complex" and "nerve-muscle complex" to designate whether the minimum duration represents only muscle tissue or muscle which has some innervation.

There are a number of objections to other apparatus for clinical use, therefore, with the assistance of Professor Pyle, we have devised a machine which would deliver currents of four durations within the nerve muscle limits and one for muscle time.

From the clinical cases studied for a period of over a year and animal experiments studied from the time of injury of the nerve to complete recovery, we conclude:

(1) Nerve irritability is probably lost by the fourth or fifth day when an anatomical lesion exists but is never lost in a case of a physiological lesion.

(2) Irritability of the nerve following an anatomical lesion remains normal until a few hours before it disappears. At this time the nerve-muscle complex gradually lengthens to the muscle complex.

(3) As regenerating fibers reach the muscle the nerve-muscle complex gradually shortens to normal and the longest nerve-muscle complex (0.0008 sec.) is a very reliable sign of regeneration. It enabled us to detect regeneration one to six months before the return of faradic response, from one week to three months before voluntary contractions and from zero to five months before contraction of the area of anesthesia.

Thus we feel that we have a more accurate method of testing muscles electrically than has been in use heretofore. This taken together with sensory changes, trophic disturbances, and other clinical tests makes for a more accurate diagnosis, and an earlier prognosis. In addition it enables one to follow more accurately the progress of a case and estimate the value of various therapeutic measures.

DISCUSSION

Dr. Gasser: I would like to emphasize a point that Dr. Malone has already made, namely, that they are using an instrument which has a distinct advantage over the induction coil. It is customary in testing for the reaction of degeneration to speak of stimulation by "galvanic" and "faradic" currents. These are convenient terms but it is well to remember that a faradic current is the same kind of current as a galvanic current. The faradic current

obtained from the induction coil has a short duration. The form of the shock and its duration depend upon the structural characteristics of the induction coil and are in most cases unknown to the observer. The physiological significance of the "galvanic" stimulus lies in its method of use, a constant current is made or broken and the stimulating current has a long duration. In the apparatus just presented, instead of being limited to the very short shock from the induction coil and the very long stimulus by a "make" shock, they have an apparatus which delivers stimuli of known shape, strength and duration.

Dr. Pyle: I will add to what Mr. Malone said in regard to this instrument. One novel feature of this device is that it is spring driven. When Dr. Sachs first proposed the problem of constructing a portable apparatus it appeared to me a question as to how constant a spring action would be. A retest showed a very satisfactory constancy. I think it will solve the problem. It only remains to find out if this spring will retain its elasticity. I hope it will stand the test. I know of a certain spring that has been in constant use for twenty years and the properties are apparently the same.

Dr. Brooks: One of the cases which Drs. Sachs and Malone have reported was operated upon by me.

This patient was treated for a popliteal aneurysm and the operation consisted of an obliteration of the popliteal artery. The operation was followed by a complete paralysis of all muscles below the knee with an anesthesia corresponding in distribution to a complete blocking of the sciatic nerve. Since the nerves were handled with such care during the operation and there was such a diminution of blood supply to the leg, it was thought that this was a case of ischaemic paralysis rather than nerve paralysis.

It would seem to me that the method which has been described might possibly offer a means of distinguishing between the ischaemic paralysis and pure nerve paralysis. It may be that in ischaemic paralysis the changes in chronaxia would follow immediately the obliteration of the artery, while nerve paralysis apparently changes chronaxia only after several hours have elapsed.

3. THE DIFFERENTIAL DIAGNOSIS OF SYPHILIS AND CANCER OF THE UTERUS.—By DR. GEORGE GELLHORN.

The correct differentiation of syphilis and cancer of the uterus is of much greater practical importance than is generally recognized by the profession, and even gynecologists are not always as familiar with the subject as might be desired. The numerous reports of diagnostic mistakes which are found in literature bear eloquent testimony. The very large material of the Barnard Free Skin and Cancer Hospital has given the writer exceptional opportunities to study the two categories of cases under discussion.

The difference between the two diseases is best explained on the basis of pathologico-anatomic conditions. By means of lantern slides the gross aspect and the microscopic structure of the various stages of inverting squamous-cell carcinoma of the cervix are first exhibited. The ingrowing cancer cells which by their very bulk stimulate hardness, destroy the connective tissue in their path and as they are not supported by any connective tissue of their own, this hardness proves deceptive and the examining finger may readily be forced into the diseased tissues. In doing so, the many newly-formed and thin-walled blood vessels are opened up and a copious bleeding

accompanies the examination. Cancer cells are inherently immature and therefore succumb easily to any form of traumatism, and thus a port of entrance is given to the bacteria of the vagina which especially convert the cancerous tumor into carcinomatous ulcer. The depth of this ulcer increases quickly until a crater with its well-known characteristics of a hard, irregular wall and a necrotic interior is formed.

The syphilitic lesion of the cervix is shown by numerous pictures to consist of a granulomatous infiltration beneath the normal or thickened squamous-cell epithelium. This infiltration represents the reaction of the fixed elements, i. e., the endothelial and connective tissue cells, to the spirochete pallida. The rigidity of the cervix thus produced is a very real one and is not appreciably altered even after the pathologic process breaks through to the outer surface and the secondary bacterial invasion has established an ulceration. Such syphilitic ulcers are, as a rule, superficial, their center is well marked, the border is slightly raised, and the base is of a bright red color with a characteristic yellowish undertone. There is very little, if any, bleeding on manipulations because the numerous, newly-formed blood vessels are protected from trauma by proliferation of the endothelium and adventitia. A number of typical luetic ulcers are shown on the screen.

In like manner are the distinctions between the cancerous cauliflower and the syphilitic gumma of the cervix demonstrated. While these two conditions may greatly resemble each other in size and outline, the histologic differences are such that they must needs result, in cancer, in an apparent hardness which yet yields readily to finger pressure, in profuse bleeding, and in extensive tissue destruction; while, in a gumma, there is a tumor of ligneous consistency which usually bleeds but little and may remain intact and free from bacterial invasion for a long time. Cancer, as a rule, spreads into the vesico-vaginal septum first, whereas such an extension is rare in gumma. The writer has seen only one case where the base of the bladder was invaded by the syphilitic process.

The clinical criteria are of diagnostic value only in conjunction with the pathologico-anatomic picture. This refers to the age factor; the writer has recently seen a woman of 22 with an inoperable cancer of the cervix, and gummata of the cervix in two women of 57 and 62 years, respectively. Pain, cachexia, and the appearance of luetic lesions elsewhere in the body are only of corroborative importance. The outcome of the Wassermann test is of very limited value. The demonstration of spirochetes definitely establishes the diagnosis. The writer has had no difficulty in finding them in luetic ulcers, but he has never been able to demonstrate them in gummata. The correct differentiation by means of the microscopic examination of excised tissues is not always as conclusive as is claimed in text-books. A number of microphotographs are shown to illustrate this point and to demonstrate the difficulties of interpretation.

The exact diagnosis, then, must be based upon the judicious combination of all criteria enumerated above. If there is still a doubt, the therapeutic test will quickly clear up the situation.

DISCUSSION

Dr. Opie: The histological diagnosis of syphilis without demonstration of *treponema pallidum* is difficult and often impossible. In the specimens that Dr. Gellhorn has shown proliferation of epithelium has been conspicuous. We know that epithelial proliferation often occurs with chronic ulceration, but

it does not commonly have characters suggestive of carcinoma. I would be very much interested to know what were the criteria upon which the diagnosis of syphilis was made and if the decision was in most instances based upon the result of treatment.

Dr. Otto H. Schwarz: Since 1916, when Drs. Gellhorn and Ehrenfest fully described syphilitic lesions of the internal genitalia and commented on the comparative frequency of cervical manifestations, I have been constantly on the lookout for such lesions. A considerable number of cervixes have been excised and studied microscopically and so far I have seen only three positive cases, a primary, a secondary and a tertiary lesion of the cervix. It is Dr. Gellhorn's opinion that the tertiary lesions of the cervix are comparatively common. My experience does not substantiate this idea. Cullen who for many years has had the advantage of a carefully worked up gynecological material, has had no experience with the tertiary lesion of the cervix. This has also been the experience of others. Personally I have had no particular difficulty in diagnosing carcinoma or confusing it with a possible existing luetic lesion. The proliferations of the epithelium which Dr. Gellhorn described are frequently present in connection with simple ulcers of the cervix in cases of prolapse. I have also seen similar manifestations in connection with condylomata lata and urethral caruncles.

Dr. Taussig: Dr. Gellhorn has failed to mention one very important point—that is, the greater tendency for syphilitic ulceration in the negro.

Syphilitic lesions of the cervix are much more frequent among negroes than among white women. The proportion is about five to one. In some of these gummatous ulcerations we have a large crater and an induration extending into the parametrium that closely resembles the picture found in advanced carcinoma of the cervix.

Closing remarks by Dr. Gellhorn: I want to say in answer to Dr. Opie that the foremost criterion must be the findings at examination; the apparent or real hardness, the amount of bleeding, and the greater or lesser extent of the tissue destruction, and the interpretation of these findings as expression of changes within the affected tissues. Clinical and laboratory examinations are only of subsidiary value. The final decision, in many cases, depends on the therapeutic test. In practice, the proposition amounts to this: the vast majority of our cancer patients come to us either wholly inoperable or in a state bordering on inoperability. If there be the slightest doubt as to the exact diagnosis, intensive antiluetic treatment of two weeks will decide the question. If the lesion is syphilitic, it will retrogress or disappear within that time. If it is cancerous, the condition remains unchanged and the loss of it will be insignificant.

BENTON COUNTY MEDICAL SOCIETY

Benton County Medical Society met on Thursday, October 13, 1921, in the parlor of the Osage Valley Bank and was called to order by the president, Dr. James A. Logan. The minutes of the last meeting were read and approved. The election of officers for the year 1922 being next in order the following were elected:

President, Dr. James A. Logan, Warsaw.
Vice President, Dr. O. L. Cuddy, Lincoln.
Sec. and Treas., Dr. J. P. Van Allen, Cole Camp.
Delegate, Dr. H. G. Savage, Warsaw.
Alternate, Dr. T. S. Resser, Cole Camp.
Censor for Three Years, Dr. J. R. Smith, Warsaw.

After the election was completed the question of the subject of preventive blindness was taken up

and discussed and the president appointed the following doctors as a committee to prepare and present to the public this vital matter, Dr. H. G. Savage, Chairman, Dr. O. L. Cuddy and Dr. J. P. Van Allen, who will, in connection with and acting on advice of the State Association, endeavor to bring this matter before the people and will attempt to in part at least eradicate some of the evils of the present time as regards the care of the eye.

It was decided that every member of the Society should attend at least one meeting each year or be automatically suspended unless prevented by some unavoidable cause.

It was unanimously decided to hold at least three meetings during the coming year, one at Cole Camp, one at Lincoln and one at Warsaw.

A vote of thanks was extended the cashier and the board of directors of the Osage Valley Bank for allowing us the use of their pleasant directors' room for our meeting.

Attendance was good and much interest manifested.

J. R. SMITH, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

The Jasper County Medical Society met in regular session October 4, 1921, the president, Dr. Grant-ham, in the chair and twenty-eight members present. The minutes of the last meeting were read and approved.

The evening was spent in going over the business of the Society.

A motion to amend the by-laws of the Society increasing the annual dues to \$8.00 was adopted.

Dr. B. A. Smith, of Southwest City, was elected to membership by transfer.

The chair was empowered to appoint a hospital committee for the purpose of inspecting and grading hospitals in the county. The committee appointed is to consist of Dr. W. B. Post, of Carthage; Dr. B. A. Dumbauld, of Webb City; Dr. L. C. Chenoweth, of Joplin.

JAMES I. TYREE, M.D., Secretary.

MARION COUNTY MEDICAL SOCIETY

The regular meeting of Marion County Medical Society was held at Hannibal at 8 p. m., Friday, October 7, with Dr. Roselle, President, in the chair. Others present were: Drs. Hornback, Hardesty, Hamlin, Baskett, Hays, Ross. Dr. Gilfillan, of Battle Creek Sanitarium, was a visitor.

It was decided to appoint a committee of three to keep the Society informed as to the selection of delegates to draft a new constitution for Missouri. Dr. Roselle will appoint two in Hannibal and three in Palmyra in the next few days.

MARY S. ROSS, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

Randolph County Medical Society held its regular monthly meeting at Moberly, October 11, Dr. R. D. Streeter presiding. Members present: Drs. R. A. Mitchell, G. O. Cuppaidge, T. S. Fleming, L. A. Bazan, R. D. Streeter, E. W. Shrader, M. E. Leasley, J. Maddox, C. H. Dixon. Dr. Smith, from Woodland Hospital, visitor.

The board of censors reported favorably on the application of Dr. J. Maddox, of Moberly, and he was unanimously elected to membership.

The chair appointed a committee, consisting of Drs. Dixon, Fleming and Cuppaidge, to arrange for our next meeting and invite neighboring county societies to join us; a special program is to be provided.

Dr. Mitchell read a paper on "Infant Feeding" which was well received and generally discussed.

C. H. DIXON, M. D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at the office of Dr. W. F. Justice, Lancaster, October 12, 1921, with the following present: Drs. W. F. Justice, B. B. Potter, J. H. Keller, A. J. Drake, O. P. Farington, H. E. Gerwig, and J. B. Bridges. The meeting was called to order at 2 p. m. by Dr. W. F. Justice, president, and the minutes of the last meeting were read and approved.

Dr. J. H. Keller read a paper on "Scarlatina," which was well received by the Society and discussed by the members.

Dr. H. E. Gerwig read a paper on "Gastritis." This also was a very interesting paper and was discussed.

A committee consisting of Drs. A. J. Drake, H. E. Gerwig and J. B. Bridges, appointed to draft resolutions on the death of Dr. William A. Potter, one of our members and co-workers who died September 22, 1921, reported as follows:

WHEREAS, Death has entered the home of one of our members, Dr. William A. Potter, who died September 22, 1921, and has taken another link from our chain, we bear willing testimony to the sterling integrity of Dr. Potter, to his devotion to his family, his country and our fraternity, and commend his example to our members as one worthy of emulation and we deplore the fact that he had to be cut down in the time of his greatest usefulness; therefore, be it

Resolved, That in the death of Dr. Potter his family has lost a true friend, a wise counselor and a good provider, this Society a useful and honored member, and the community a good man and citizen;

Resolved, That a page in our records be dedicated to his memory and a copy of these resolutions be sent to the family.

A. J. DRAKE,
H. E. GERWIG,
J. B. BRIDGES,
Committee.

SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society met October 11 with the following members present: Drs. H. V. Ashley, W. S. Hutton, S. Doggett, W. H. Wescoat, J. A. Cline, G. T. Dorris, G. S. Cannon, G. W. Trisler, C. D. Harris, and Dr. John R. Lionberger, visitor.

A splendid program was carried out, after which the officers for 1922 were elected, as follows: President, Dr. C. D. Harris; vice president, Dr. H. V. Ashley; secretary, Dr. E. J. Nienstedt; delegate, Dr. G. T. Dorris; alternate, Dr. G. S. Cannon. Although the secretary offered his resignation the Society declined to accept it. The next meeting will be held at Illinois.

SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The Southeast Missouri Medical Association met at Charleston, October 18 and 19 for their semi-annual session. Dr. H. L. Reid, of Charleston, called the meeting to order and introduced the Hon. Thomas J. Brown who delivered an address of welcome to which Dr. W. R. Goodykoontz responded. Dr. Grinstead, of Cairo; Dr. Sebastian, of Wayne County; Dr. Chapman, of Charleston, and Dr. Frazer, of Commerce, also spoke at the opening ses-

ion. Dr. Frazer, president of the Association, then took the chair.

The program was well prepared and several interesting papers were read. On Wednesday at noon the members were entertained at a barbecued dinner at Brewer's Lake. The next meeting will be held at Fredericktown in May, 1922.

BOOK REVIEWS

ROENTGEN INTERPRETATION. A Manual for Students and Practitioners. By George W. Holmes, M.D., Roentgenologist to the Massachusetts General Hospital and Instructor in Roentgenology, Harvard Medical School; and Howard E. Ruggles, M.D., Roentgenologist to the University of California Hospital and Clinical Professor of Roentgenology, University of California Medical School. Second edition, thoroughly revised. Price, \$3.25. Lea & Febiger, publishers, 1921.

The second edition of this work is completely revised and presents a manual for the ground work in roentgenology essential to a successful understanding of this branch of medicine. The book is designed to meet the need of the general practitioner or novice in X-ray work and presents very ably the fundamentals of X-ray interpretation.

Each subject is treated in a brief, concise manner, unencumbered by multitudinous personal references in the text, and the important points in the interpretation pointed out.

The chapters on anatomical variations, bone injuries and bone pathology are especially commendable for their thoroughness. Everything is presented in the dogmatic manner so essential to the clear understanding of the beginner in any subject, and the text is profusely illustrated with suitable radiographs. The chapters on the chest and gastro-intestinal tract, while necessarily brief, are sufficiently thorough to give a good understanding of the latest conception of roentgenology in these branches, and the chapter of the urinary tract while very short, is illustrated with well chosen radiographs which give a better conception of the conditions in point than could be obtained by the consideration of a much larger number of less suitably selected cases.

Of almost as much value as the text itself is the bibliography for collateral reading at the conclusion of each chapter which represents the headlines in radiological advancement and presents the work of the foremost men of the country.

L. R. S.

THE ALLEN (STARVATION) TREATMENT OF DIABETES. By Lewis Webb Hill, M.D., Junior Assistant Visiting Physician, Children's Hospital, Boston, and Rena S. Eckman, Dietitian, Massachusetts General Hospital, Boston, 1911-1916, with an introduction by Richard C. Cabot, M.D. Fourth edition. Price, \$1.75. Publisher: W. M. Leonard, Boston, 1921.

This volume of 140 pages conveys in a compressed manner the essentials of the modern dietetic treatment of diabetes. It details in a very practical form the methods and exact dietary used in the Massachusetts General Hospital, the application of which has been responsible for a very material lowering of the mortality rate from diabetes in that institution.

The present wide adoption and the accepted successful results of the administration of the "Allen Treatment" have depended on a detailed knowledge of food compositions and combinations, and in this present work a very practical series of calculated dietary is outlined which must be of particular value to the practitioner treating these cases, as also to the patient in successfully co-operating in his par-

ticular diet. Besides the illustrated diets which form the main composition of the book the essentials of the "Allen Treatment" are outlined and illustrative cases reported. Instructions in urinalysis and suggestions regarding the composition of palatable diets, as well as the various food values necessary to the establishment of a dietary are briefly but very practically detailed. The volume ought to be a useful one to both practitioner and patient.

L. S. M.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D. Seventh Edition, Reset. Octavo of 1111 pages with 509 text illustrations, many in colors, and 15 colored plates. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$8.50 net.

In this edition are to be found some new features, among them discussions of certain disease entities, such as influenza and trench fever, which were in the foreground during the late war.

The authors follow the time honored custom of dividing the work into two sections, the first dealing with general the second with special pathology. They also follow the time honored custom of disregarding these divisions, and mix the subject matter.

Chapter 1 deals with the "Etiology of Disease," and all the classic etiological factors in disease causation are discussed. Chapter 2 deals with the metabolism of fat, protein and carbohydrates. Metabolism of calcium, iron and pigment are not mentioned although it would seem that these might be appropriately discussed in this chapter.

The next five chapters are concerned with disturbances of circulation, inflammation, retrogressive and progressive processes. Under the latter heading tumors are enumerated, classified, and discussed. A paragraph or two on precancerous changes would be a desirable addition to this chapter.

In the next two chapters, bacteria and disease due to bacteria are considered, with a discussion of immunity under a subhead. While some of the points of present interest in this field are mentioned, much of the terminology and subject matter are out of date and would best be left to the textbooks on bacteriology. The meningococcus is referred to as "Streptococcus Intracellularis Meningitidis," and B. Typhosus is "The Bacillus Typhi Abdominalis." Some of the statements regarding the culture of organisms would hardly be regarded as practical by one working with them.

Chapter 10 is devoted to parasitic diseases and following this a short chapter on the "Mode of Transmission of Disease" concludes the section of general pathology.

In Part 2 the pathology of diseases of the various organs, tracts and systems is presented and the completeness of this part of the book is a valuable asset.

Hardly anything is omitted even though the reference be brief—beginning with diseases of the circulatory system and ending with the skin, hair and nails.

Some of the illustrations are very good, particularly the colored plates.

On the whole, this new edition is well worth while and would be a valuable addition to the library of one interested in this subject. As a single text-book for student or practitioner it would hardly be the book of choice.

L. C. M.

THE PRINCIPLES OF THERAPEUTICS. By Oliver T. Osborne, M.D., Professor of Therapeutics, Department of Medicine, Yale University. Octavo of 881 pages. Philadelphia: W. B. Saunders Company, 1921. Cloth, \$7.00 net.

Ever since the reviewer began teaching therapeutics to senior students several years ago he has been

looking for a book to recommend as a text. It seems difficult, almost impossible, for those who are moved to write on this subject to outline a plan which is comprehensive and adequate and in conformity with modern ideas. A general discussion, one subject to a chapter, of drugs, serums and other biologic products, diet, hydrotherapy, massage, electrotherapy, psychotherapy, and certain semi-surgical procedures, such as thoracentesis and lumbar puncture, would seem to be a sensible, almost an inevitable, plan. This could be followed by special therapeutics—a discussion of the treatment of individual diseases.

Dr. Osborne has almost but unfortunately not quite done either or both of these things. He has indeed chapters on drugs, diet, endocrine therapy, serums and vaccines, and general physical measures (hydrotherapy, massage, etc.). But the proportions are badly allotted. Why should endocrine glands and organotherapy take up 112 pages in a book of a little over 800 pages? If this book is devoted to the principles of therapeutics why should there be a whole chapter on the treatment of some (not all) simple diseases of the skin? There is no chapter on the treatment of simple digestive disturbances; none on simple respiratory disturbances. There is a section on ingrowing toenail, but none on prepatellar bursitis, hydrocele, felon, or corns. Why one and not the others? There are also chapters on chronic poisoning, industrial poisoning, the treatment of emergencies (including "sudden death," a difficult subject for the therapist), practical advice to young physicians (which none save the matriculates of the University of Yale will read and none, without exception, will follow) and medical ethics, and other such subjects as may be found in handbooks printed for the profession by pharmaceutical houses. Why the classic table of the differential diagnosis of eruptive fevers has been omitted we are at a loss to understand. The literature of therapeutics still awaits, so far as the reviewer knows, its Osler, or Moynihan, or Cushing—it still awaits a first-rate mind, backed by adequate experience and endowed with lucid expression.

L. C.

DE L'ANAPHYLAXIE A L'IMMUNITE per Maurice Arthus, professeur de physiologie a l'Universite de Lausanne. Un volume de 361 pages. Masson Et Cie, Editeurs, 120, Boulevard Saint-Germain, Paris-Vie. Price, 20 fr. net.

In his preface Prof. Arthus develops at length his system of research and his method of presentation of the data thus obtained. In his book itself he uses the historical method, presenting first the original discoveries and then the subsequent experiments that confirmed them and developed the relationship of the facts discovered.

His studies were made chiefly with animal extracts and toxins, and closely follows the work of Ch. Richet. The experiments are carefully described and quotations from original papers made.

The author recounts a discussion with Prof. Kühne, at Heidelberg in 1891 in which the latter pointed out the difference between Latin (as we would say, Romance) and Teutonic writers—that the clarity of the former was due to their omission of all secondary and confusing phenomena in their accounts of their experiments. Prof. Arthus prides himself on being "Latin" rather than Teutonic.

The present tendency to treat hay fever, asthma, and certain skin diseases as evidences of anaphylaxis makes the knowledge of its general principles extremely important. So much so, that we may take the time here to point out some of Arthus' conclusions. He found the minimum time in which anaphylaxis could be produced to be 7 to 8 days. He found it stronger after a fortnight. He found,

further, that the continued use of the sensitizing dose of protein produced an immunity, usually after the 5th (weekly) injection.

These two facts alone make it extremely important for us to guard our actions carefully in injecting the various serums, vaccines and organ preparations, lest we include proteins and thus sensitize our patients; or if we must use proteins that we carry the treatment far enough to secure immunity before we stop. And, further, we need to keep the interval between doses always exact in order not to have the next dose fall into the sensitization zone.

Arthus also points out that immunity is specific. That is, we must have the exact substance that causes the anaphylaxis if we wish to secure an immunity. We cannot therefore expect even a 50 per cent. efficiency with bacteriological or serological work that is inexact. We need more than guess as to which of several organisms, for instance, which it is that has produced asthma. In other words, if the general practitioner is to take up the matter of treating anaphylactic states he must first learn to test for sensitization, then to test for identity, and then cultivate in purity his proteins and organisms.

To those who can read the French we commend this book for its clarity, precision, and brevity.

G. H. H.

DISEASES OF THE SKIN. For the Use of Students and Practitioners. By Oliver S. Ormsby, M.D., Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College. Second Edition, thoroughly revised. Illustrated with 445 Engravings and 4 Plates in Colors and Monochrome. Publishers: Lea & Febiger, New York, 1921. Price, \$10.00.

If all books were as sane and well-balanced as this one the reviewer's life would be filled with joy. A considerable amount of new material has been incorporated into this edition together with an exhaustive and carefully selected list of references, and a number of excellent and original illustrations.

The opening chapters on the anatomy and physiology of the skin are clearly and concisely written, and the section on general therapeutics is worthy of the careful study of every practitioner of medicine. In the thousand pages of descriptive matter that follow, the entire field of modern dermatology is covered in an able and scholarly manner. Practically no disease of importance has been omitted.

The literary references are both accurate and complete. The suggestions on treatment are practicable and conservative. The book is an excellent piece of work, and is a credit to the author and to American dermatology.

R. L. S.

PROSTHETIC DENTISTRY. A Text-Book on the Chair-Side Work for Producing Plate Dentures. By Douglas Gabell, L.R.C.P., M.R.C.S., L.D.S., Dental Surgeon to the Royal Dental and Charing Cross Hospitals. Lecturer on Dental Mechanics to the University of London at the Royal Dental Hospital. Price, \$4.25. Henry Frowde and Hodder & Stoughton, The Lancet Bldg., London. Oxford Medical Publications.

The book is primarily a student's manual and is an elementary treatise on partial and full dentures and bridge construction. Much attention is given to detail in a description of chair technic, which is of importance to the novice. Several pages are devoted to a description of obsolete technic, and other technic not exactly obsolete, but not conforming to present-day modifications; yet it cannot be said that this is entirely out of place since it is important that students be familiar with the evolution of dentistry. The book has merit for the stu-

dent, but the American dentist who has kept abreast with progress in prosthetic dentistry within the past ten years will find nothing new.

E. B. O.

THE ASSESSMENT OF PHYSICAL FITNESS, By Correlation of Vital Capacity and Certain Measurements of the Body. By Georges Dreyer, C.B.E., M.A., M.D., Fellow of Lincoln College, Professor of Pathology in the University of Oxford. In collaboration with George Fulford Hanson. With a Foreword by Charles H. Mayo, M.D., Rochester, Minn. Cloth, pp. 128, with XXIV Tables. Price, \$3.50 net. New York: Paul B. Hoeber.

If the theory on which this book is based be true, it would seem that a very rapid and accurate method of examination to determine physical fitness has been developed. After setting forth in a few pages the idea he wishes to convey, which is almost if not quite expressed in the title, the author includes over a hundred pages of tables, showing the methods of calculating the normal weight of the body from the circumference of the chest, and vice versa, in males and females.

A certain, definite relationship exists, the author asserts, between weight and length of trunk, vital capacity, and physical fitness.

M. A. B.

NUTRITION AND CLINICAL DIETETICS. By Herbert S. Carter, M.A., M.D., Assistant Professor of Medicine, Columbia University; Paul E. Howe, M.A., Ph.D., Associate in Animal Pathology Rockefeller Institute for Medical Research, and Howard H. Mason, A.B., M.D., Instructor in Diseases of Children, Columbia University, New York. Second Edition, Thoroughly Revised. Price, \$7.50. Publishers: Lea & Febiger, New York, 1921.

The fact that this book has come to its second edition shows its popularity. It is written by a pediatrician, a nutrition expert, and an internist.

Part 1 deals with "Foods and Normal Nutrition;" it is perhaps too brief, especially in regard to intermediary metabolism of proteins and carbohydrates, but the chapter on total metabolism is excellent and so is the one on inorganic requirements, while the chapter on food economics is to be especially recommended. Part 2, on "Food," is quite complete and well done and Part 3 treats on "Infant Feeding." Part 4 takes up about one-half of the book in the consideration of diet in diseases. It is the poorest part of the book although the diseases in which dietetic treatment is most important are well handled, but there is a mass of unimportant material. Almost all medical diseases are mentioned even if dietetic treatment is of very little importance.

As a whole the book is recommended especially for the first half and for the part dealing with food and inorganic metabolism. It would have a greater appeal to some readers if there were more indentations and paragraph headings.

W. H. O.

DISEASES OF CHILDREN. Designed for the Use of Students and Practitioners of Medicine. By Herman B. Sheffield, M.D., Formerly Instructor in Diseases of Children, New York Postgraduate Medical School and Hospital, and Medical Director; with 238 illustrations, mostly original, and nine color plates. C. V. Mosby Company, St. Louis, 1921. Price, \$9.00.

A great deal of general information is to be had by reading this new work, especially for the student or general practitioner who wishes to begin the study of diseases of children. Considerable space is given to the physical examination of the child, which is a necessary preliminary to any consideration of

pathological conditions. Chapter III has more than the usual space devoted to congenital malformations. Throughout the book many conditions in childhood have only a few lines of mention, insufficient for giving any adequate information, but evidently included for the sake of enumerating all diseases that might occur in young life. There are numerous references to newer methods of examination and treatment. Idiocy and allied mental deficiencies are grouped under the heading of "Amentia" which is commendable in its simplicity. A new work from a new viewpoint is found in this text and, while trying to cover too big a subject in one volume, it will make a useful addition to one's library on pediatrics. F. C. N.

ELECTROTHERAPY (Handbook). For Practitioners and Students. By Burton Baker Grover, M.D., President of the Western Electro-therapeutic Association and Fellow of the American Electro-therapeutic Association. Illustrated with 103 engravings in the text and 6 plates of 12 charts. F. A. Davis Company, Philadelphia, Pa. Price, \$4.00 net.

This is a brand new book upon electrotherapy by a new author. The arrangement of the text closely follows many of its predecessors with this exception: The author injects paragraphs of philosophical reflections in the midst of facts. The conversational diction makes for ease in reading.

Another feature to commend is the author's advice upon general therapeutic measures in conditions in which electrotherapy is only an adjuvant treatment. There is no grotesque insistence upon the exceptional values of electrotherapy, therefore this may be considered a safe and sane book.

The chapters upon "High Blood Pressure" and "Hypertension" are excellent. Charts and case histories are included. These are really the advantages of this volume over many others upon electrotherapy.

It may be remarked, *en passant*, that among other disadvantages of the early armistice of 1918, electrotherapy suffered. If America was overloaded with war cripples as were England and France, the value of this department of medicine would have been displayed to a large audience of doctors and patients. Especially have the French hospitals shown the profession that chronic conditions are benefited by intelligent selection of electrical modalities.

E. H. S.

EPIDEMIC RESPIRATORY DISEASE. The Pneumonias and Other Infections of the Respiratory Tract Accompanying Influenza and Measles. By Eugene L. Opie, M.D., Colonel M.R.C., U. S. Army; Professor of Pathology, Washington University School of Medicine. Francis G. Blake, M.D., Associate Member of the Rockefeller Institute for Medical Research. James C. Small, M.D., Bacteriologist, Philadelphia General Hospital. Thomas M. Rivers, M.D., Associate in Bacteriology, Johns Hopkins University. Illustrated. C. V. Mosby Co., St. Louis. \$6.50.

The authors of this book were appointed as part of a commission to study the epidemic of influenza at Camp Funston in July, 1918, and continued their work there for several months. In the various chapters they review the etiology of influenza, the clinical features, secondary infection, the pathology and bacteriology of the associated pneumonias, and purulent bronchitis of influenza and measles, as they appeared in army camps during 1918. Naturally the work will apply also to the same cases in civil life. Along with the monograph of the Rockefeller Institute by MacCallum on the pathology of the same diseases as seen at Fort Sam Houston and at Camp Dodge, this

book will serve as the final summary of the work done by American research during this historic epidemic. An extended review of the work is impossible as every page is crowded with technical detailed information. No one who pretends to be well informed on this subject can afford to be without it.

L. C.

THE OXFORD MEDICINE. By Various Authors. Edited by Henry A. Christian, A.M., M.D. Hersey Professor of the Theory and Practice of Physic, Harvard University; Physician-in-Chief to the Peter Bent Brigham Hospital, Boston, Mass. In six volumes illustrated. London: Oxford University Press. American Branch, 35 West 32nd St., New York.

The most valuable contributions in this volume are those of Joslin on "Diabetes Mellitus," McCrae on "Arthritis Deformans," and Miller on "Typhoid Fever." Christian's article on "Influenza" leaves the subject still open for discussion. Allbutt's article on "Gout" is unsatisfactory, because his collaborators, Hopkins and Wolf, do not handle the chemistry and pathogenesis of gout in a way that one would expect to accompany the brilliant clinical writings of Allbutt himself.

A noteworthy advance in this system is the introduction of articles on industrial medicine by those who have specialized in that work. The Doctors Drinker find it necessary to write a long dissertation on "The Physiology and Pathology of Work" preliminary to a chapter on "Industrial Medicine," by W. I. Clark, who is an instructor in the practice of industrial medicine and lecturer on health administration in industry at Harvard University.

In favor of the volume is to be remarked the high grade of the better articles; in criticism we note the insufficiency of the shorter articles. In other words, the matter of balance is hard to maintain when many authors contribute to a system.

G. H. H.

GRAPHIC METHODS IN HEART DISEASE. By John Hay, M.D., F.R.C.P.; Honorary Physician Liverpool Royal Infirmary, Honorary Consulting Physician Ministry of Pensions, Late Consulting Physician in Diseases of the Heart (Western Command). With an introduction by Sir James Mackenzie, M.D., F.R.C.P. Publishers: Oxford University Press, American Branch, 35 W. 32d street, New York.

This is a helpful primer for those who wish to use the polygraph, the electro-cardiograph, or other recording instruments in the study of heart disease. It is elementary enough to be intelligible to the beginner, and exact enough to help out the more advanced student who wishes to review the principles of the subject. It is not controversial, but utilizes the information obtained by Mackenzie, Lewis, and others who have the movement for objectivity in the study of the heart.

G. H. H.

INFECTIONS OF THE HAND. A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern University Medical School, Attending Surgeon Wesley and Cook County Hospitals, Chicago. Fourth Edition, thoroughly revised. Lea & Febiger, Publishers, 1921. Price, \$5.50.

There has never been written a more vitally essential book than Kanavel's *Infections of the Hand*. Good surgeons know in a general way the truths it contains. It is the general practitioner who should know its contents.

A. E. H.

GENERAL PATHOLOGY. An Introduction to the Study of Medicine. Being a Discussion of the Development and Nature of Processes of Disease. By Horst Oertel, Strathcona Professor of Pathology and Director of the Pathological Museum and Laboratories of McGill University and of the Royal Victoria Hospital, Montreal, Canada. Cloth, pp. 357, with illustrations. Price, \$5.00 net. New York: Paul B. Hoeber, Publisher.

Most text books of medicine are constructed along the same general lines, and for that reason it is difficult for one to manifest that intense, sustained interest which goes with the perusal of books on philosophy, history or fiction. Classics in medicine are few and far between. True, some subjects are difficult to handle along philosophic lines, being essentially technical, and many medical authors have no philosophy in their systems, consequently there is not a chance of their writing in this fashion. Fortunately, Professor Oertel is essentially a philosopher and his subject is one that appropriately is handled along that line. The book is therefore one of the most intensely interesting works that the reviewer has had the good fortune to read in a long time. It is refreshing and illuminating, written by one who knows and feels his subject.

In this book are discussed purely the etiology, the pathological processes of disease, and pathogenesis. We recommend the book to all who are interested in the study of medicine, from the fledgeling to the adult. It is a splendid book to present to a young man who contemplates or is beginning the study of medicine. It should be on the library table of all physicians and should be read from cover to cover. The subject is covered in a most erudite and philosophical manner. We congratulate Professor Oertel on his achievement and say unto him as he says unto his institution on his dedicatory page, *Vivat, Crescat, Floreat.*

R. B. H. G.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

SILVER ARSPHENAMINE.—Sodium Silver Arspenamine.—The sodium salt of silver-diamino-dihydroxy-arseno-benzene, containing approximately 20 per cent. of arsenic and approximately 15 per cent. of silver. The action and uses of silver arspenamine are essentially those of arspenamine (see New and Nonofficial Remedies, 1921, p. 41). Its claimed advantage over other arspenamine preparations is said to be due to the silver which improves the chemotherapeutic index. In the presence of organic diseases of the heart, aneurysm, aortitis as well as other parenchymatous diseased conditions of the glandular structures, silver arspenamine should be used with great caution and in small doses. The dose of silver arspenamine is from 0.1 to 0.3 gm. for adults. To administer silver arspenamine the product is dissolved in sterile distilled water without application of heat and without shaking and then diluted with 0.4 per cent. sodium chlorid solution to make 20 c.c. per 0.1 gm. of silver arspenamine (*Jour. A. M. A.*, May 7, 1921, p. 1312).

SUPRARENALIN. A brand of epinephrine, N. N. R. (see New and Nonofficial Remedies, 1921, p. 107). Marketed only in the form of Suprarenalin Solution.

SUPRARENALIN SOLUTION.—One thousand parts contain suprarenalin sulphite equivalent to one part of suprarenalin in physiological solution of sodium chlorid without addition of other preservatives. Armour & Co., Chicago.

STERILE AMPULES OF BENZYL BENZOATE.—H. W. & D. 0.5 c.c.—One c.c. contains 0.5 c.c. benzyl benzoate. H. W. & D. (see New and Nonofficial Remedies, 1921, p. 61) diluted with olive oil. Each ampule contains more than 1 c.c. Hynson, Westcott & Dunning, Baltimore, Maryland.

SILVER DIARSENOL.—A brand of silver arspenamine, N. N. R. (see *Jour. A. M. A.*, May 7, 1921, p. 1312). Silver Diarsenol is marketed in ampules containing respectively 0.05 gm., 0.1 gm., 0.15 gm., 0.2 gm., 0.25 gm. of silver diarsenol. Diarsenol Co., Inc., Buffalo, N. Y. (*Jour. A. M. A.*, May 14, 1921, p. 1353).

MERCUROCHROME-220-SOLUBLE.—The disodium salt of dibromo oxymercury fluorescein, containing 23 to 24 per cent. of mercury. Mercurochrome-220-Soluble is a strong and rapidly acting germicide. It is active in urine 1:1,000 solution, killing *Bacillus Coli* and *Staphylococcus aureus* in this medium in one minute. It penetrates the tissues readily. The drug is tolerated in a strength of 1 per cent. by the bladder, renal pelvis and urethra. A 2.5 per cent. solution applied to the anterior urethra causes only temporary discomfort. The toxicity, when tested by intravenous injection into rabbits, is rather high. Mercurochrome-220-Soluble has been used in cystitis, urethritis and in chancroidal ulcerations; also in affections of the eye and ear. Hynson, Westcott & Dunning, Baltimore, Maryland (*Jour. A. M. A.*, May 21, 1921, p. 1403).

GUAICOL BENZOATE.—Benzosol.—The benzoic acid ester of guaiacol. Guaiacol benzoate is slowly decomposed in the intestinal tract into benzoic acid and guaiacol, which exert their usual action. It is said to be useful in the incipient pulmonary tuberculosis, as an intestinal antiseptic and a urinary antiseptic.

GUAICOL BENZOATE-SEYDEL.—A brand of guaiacol benzoate N. N. R. Seydel Manufacturing Co., Jersey City, N. J. (*Jour. A. M. A.*, June 4, 1921, p. 1575).

SALIGENIN-ABBOTT.—A brand of saligenin N. N. R. For a discussion of the actions, uses and dosage of saligenin, see New and Nonofficial Remedies, 1921, p. 35. Abbott Laboratories, Chicago.

SANTYL CAPSULES 7 DROPS.—Each capsule contains 7 drops of Santyl. See New and Nonofficial Remedies, 1921, p. 270. E. Bilhuber, Inc., New York.

SILVER SALVARSAN.—A brand of silver arspenamine N. N. R. For a description of the actions, uses and dosage of silver arspenamine, see *Jour. A. M. A.*, May 7, 1921, p. 1312. Silver Salvarsan is marketed in ampules containing respectively 0.05 gm., 0.1 gm., 0.15 gm., 0.2 gm., 0.25 gm., 0.3 gm. silver salvarsan. H. A. Metz Laboratories, New York (*Jour. A. M. A.*, June 11, 1921, p. 1654).

PITUGLANDOL-ROCHE.—An aqueous solution containing the active constituents of the posterior lobe of the pituitary gland of cattle, free from preservatives. It is physiologically standardized on the isolated uterus of the virgin guinea pig so that 1 c.c. responds in activity to 0.003 gm. betaminazolyethylamine hydrochloride. For a discussion of the actions and uses see General Article, Pituitary Gland, New and Nonofficial Remedies, 1921, p. 219. Pituglandol-Roche is marketed in ampules, each containing 1.1 c.c. Hoffmann LaRoche Chemical Works, New York.

POLLEN ANTIGENS-LEDERLE.—Liquids obtained by extracting the dried pollen of plants with a liquid consisting of 67 per cent. glycerin and 33 per cent.

saturated solution of sodium chloride. For the actions and uses of pollen extract preparations, see New and Nonofficial Remedies, 1921, p. 239. Pollen Antigens-Lederle are supplied in 15 pollen unit strengths. They are marketed as follows: Series A, containing five vials containing, respectively 1.5, 3, 6, 12 and 15 pollen units. Series B, five vials containing 18, 30, 45, 60 and 90 pollen units. Series C, five vials containing, respectively, 150, 225, 300, 450 and 600 pollen units. Complete Series, containing the fifteen doses of Series A, B and C. Diagnostic Test, containing 0.01 c.c. of a dilution representing 60 pollen units.

POLLEN ANTIGEN-LEDERLE (RAGWEED).—A liquid prepared by extracting the proteins from the pollen of the ragweed.

POLLEN ANTIGEN-LEDERLE (TIMOTHY).—A liquid prepared by extracting the protein from the pollen of the timothy. The Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, June 18, 1921, p. 1753).

CHOLERA VACCINE (PROPHYLACTIC)-LEDERLE.—A cholera vaccine (see New and Nonofficial Remedies, 1921, p. 299) marketed in packages of two 1 c.c. vials containing, respectively, 4,000 and 8,000 million killed cholera vibrios; also in packages of two 10 c.c. vials containing, respectively, 4,000 and 8,000 million killed cholera vibrios per c.c. The Lederle Antitoxin Laboratories, New York.

PLAGUE VACCINE (PROPHYLACTIC)-LEDERLE.—A plague vaccine (see New and Nonofficial Remedies, 1921, p. 304), marketed in 1 c.c. vials containing 5,000 million killed plague bacilli; also in 10 c.c. vials containing 5,000 million killed plague bacilli per c.c. The Lederle Antitoxin Laboratories, New York.

ACNE MIXED VACCINE-GILLILAND.—A mixed bacterial vaccine (see New and Nonofficial Remedies, 1921, p. 314) composed of *B. acni vulgaris*, *Staphylococcus albus* and *Staphylococcus aureus* in equal proportions. Marketed in packages of four 1 c.c. vials containing, respectively, 250, 500, 1,000, and 2,000 million killed bacteria; also in packages of four syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria. Gilliland Laboratories, Ambler, Penn.

SUPRARENALIN.—Vials containing 1 grain suprarenalin (see *Jour. A. M. A.*, May 14, 1921, p. 1353). Armour and Co., Chicago.

SUPRARENALIN OINTMENT.—An ointment containing 0.1 per cent. suprarenalin (see *Jour. A. M. A.*, May 14, 1921, p. 1353), suspended in a petrolatum base. Armour and Co., Chicago (*Jour. A. M. A.*, June 25, 1921, p. 1826).

PROPAGANDA FOR REFORM

"NATIONAL IODINE SOLUTION" NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry considered National Iodine Solution, a proprietary of the National Drug Co., because inquiries indicated that it was brought extensively to the attention of physicians. The name implies that it is a solution of iodine, and the inference is given that it has the advantages of iodine without the disadvantages. According to the label, "each fluid ounce represents three grains Proteo-albuminoid compound of iodine (National);" also an alcohol declaration of 7 per cent. is made. Otherwise no information is given as to the composition either of the "solution" or of "Proteo-albuminoid compound of Iodine." Analysis in the A. M. A. Chemical Labora-

tory indicated that each 100 c.c. contains about 7 c.c. of alcohol, 0.5 gm. of zinc sulphate U. S. P., 0.03 gm. iodine (the solution gave tests which indicated a very small amount of free iodine; most of the iodine was in the form of ordinary iodide), 0.01 gm. protein and some hamamelis water. While the preparation is claimed to contain 3 grains "proteo-albuminoid compound of iodine," yet the sum of the protein and iodine is equivalent to less than one-fifth grain. The Council reports that it is evident that "National Iodine Solution" is not a solution of free (elementary) iodine as the name suggests; instead it appears to be a solution of zinc sulphate in witch hazel water containing less than 0.03 per cent. of combined iodine and not more than a trace of free iodine; that it is sold under unwarranted therapeutic claims, and that a similar or identical preparation sold to the public for the self-treatment of gonorrhea by the National Drug Co. as Gonocol has been declared misbranded by the Federal authorities (*Jour. A. M. A.*, June 4, 1921, p. 1592).

PROTEOGENS IN SYPHILIS.—C. F. Engels, Tacoma, Wash., reports that two persons came to him who had been treated with Proteogen No. 10 for almost a year. Both patients were four plus to the Wassermann test. He writes: "The tragedy of the whole thing is that here are two people, at least, who have been deprived of adequate treatment for a year, spending their money for ignorance and fakery, getting worse instead of better, and all because of the cupidity of these people (the promoters of the Proteogens) and their success of putting over on some of the weak sisters of the profession this pseudo-scientific bunk." The Proteogens have been the subject of an extensive report by the Council on Pharmacy and Chemistry, which declared the twelve Proteogens inadmissible to New and Nonofficial Remedies because their composition is secret; because the therapeutic claims made for them are unwarranted, and because the secrecy and complexity of their composition makes their use irrational (*Jour. A. M. A.*, June 4, 1921, p. 1593).

"ASPIRIN BAYER" AND THE STERLING PRODUCTS CO.—Shortly after the United States entered the war, the Alien Property Custodian took over the property of Bayer and Co., Inc. The Sterling Products Co. acquired the pharmaceutical end of the Bayer concern. After that the Winthrop Chemical Co. was incorporated and seemingly secured control of all the Bayer pharmaceutical specialties, except "Aspirin." The Bayer Co., it was announced, had been merged with the Sterling Products Co., and "Aspirin-Bayer" added to the latter firm's list of "patent medicines": Cascarets, Danderine, Pape's Diaepsin, California Syrup of Figs, Neuralgine and Dodson's Livertone. Just what relationship exists between the Winthrop Chemical Co. and the Sterling Products Co., we do not know; the "Bayer Cross" is used on the label of the Winthrop products. As the court has ruled that on prescriptions calling for "Aspirin" the Bayer product must be dispensed, physicians should prescribe acetylsalicylic acid and not "Aspirin" (*Jour. A. M. A.*, June 11, 1921, p. 1697).

DISAPPOINTMENTS IN ENDOCRINOLOGY.—In the current enthusiasm for so-called endocrinology, medicine may become humiliated by the drift toward a sort of pseudoscience bolstered up with meaningless words and unfounded assumptions. Stewart deserves the thanks of the medical profession for the fearless and critical manner in which he has questioned (*Endocrinology*, Vol. 5, p. 283, May, 1921) much of the verbal rubbish that goes under the designation of the endocrinology of the suprarenals. There is something stinging, yet deserved, in its implied rebukes, in the words of Dr. Stewart: "On

the whole," he says, "it must be granted that hitherto the attempts made to evoke in animals a well marked syndrome characteristic of adrenal deficiency have been singularly disappointing. The contrast is great when we leave this desert, where the physiologists and experimental pathologists have wandered, striking many rocks but finding few springs, and pass into the exuberant land of clinical endocrinology, flowing with blandest milk and honey, almost suspiciously sweet." How much longer will the medical profession continue to merit such criticism? Just so long as the profession continues to give serious consideration to pseudoscientific rubbish promulgated by the exploiters of organic extracts (*Jour. A. M. A.*, June 11, 1921, p. 1685).

MON-ARSONE NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Mon-Arsone was put out by the Harmer Laboratories Co. as "a new and non-toxic arsenical for the treatment of syphilis" and that it was claimed that the drug had a therapeutic value equal to arsphenamine but was devoid of toxic action. Chemically, Mon-Arsone is related to sodium cacodylate, which latter has been proved inefficient in the treatment of syphilis. After examining the available evidence, the Council voted not to admit Mon-Arsone to New and Nonofficial Remedies and held that the claim that Mon-Arsone had a therapeutic value equal to that of arsphenamine was unwarranted; that Mon-Arsone should not be used except under conditions that justify the experimental trial of an unproved drug, and that the advertising propaganda for the drug by the Harmer Laboratories Co. was to be deprecated. When the Council sent its report to the Harmer Laboratories Co., prior to publication, the firm announced that the claim that Mon-Arsone is therapeutically equal to arsphenamine had been abandoned. In publishing its report, the Council endorsed the recent warning against the use of untried medicaments issued by the U. S. Public Health Service. It also calls attention to a report on the effect of Mon-Arsone on experimental syphilis recently published by H. J. Nichols, which showed that the drug, when tested on rabbits infected with experimental syphilis, showed no spirocheticidal power (*Jour. A. M. A.*, June 18, 1921, p. 1781).

Ittiolo is an ammonium sulphoichthyolate preparation, manufactured in Italy by the Societa Industrie Chimiche (Guiseppe W. Guidi, New York, agent). The A. M. A. Chemical Laboratory analyzed two specimens of Ittiolo and found that they differed in several particulars from the New and Nonofficial Remedies requirements for the product. The American agent for the product was informed of the results of this analysis. He was advised that Ittiolo would be omitted from New and Nonofficial Remedies unless standards for it were received within a reasonable time which would correctly indicate its composition. At the expiration of three months the Council had received no assurance from the American agent that any effort was being made to standardize Ittiolo or to insure the uniformity of its composition. Accordingly the Council directed its omission from New and Nonofficial Remedies (Rep. Council Pharm. Chem., 1920, p. 64).

Libradol (manufactured by Lloyd Bros.), according to a "readily removable label" on a trade package, may be used in "colds, croup and acute bronchitis, in local congestions, in lung troubles and acute inflammations of this or any other organ, especially if pain or soreness be present, in lumbago, sciatica or in rheumatic pains of the joints or muscles. Applied to the forehead, it induces sleep." Libradol is offered in two forms, "Libradol Mild" for infants and supersensitive persons which is said to be "destitute of drug energy," and Libradol "Regular" which

is "highly medicated," the "constituents" being "Dracontium, Sanguinaria, Cephaelis, Melaleuca, Lobelia, Laurus, Capsicum, Tobacco." An examination of the information submitted by Lloyd Bros. showed Libradol to be in conflict with the principles and rules that govern in the acceptance of articles for New and Nonofficial Remedies: 1. Composition: The information gives little idea as to the actual composition of the preparation. 2. Indirect advertising: The recommendations for the use of Libradol which appear on the trade package is prone to lead the public to depend on it in cases where definite treatment is imperative. 3. Unwarranted therapeutic claims: Libradol is recommended in a great variety of conditions and is especially claimed not only to relieve pain, but to remove the cause of pain. No evidence for the claim was submitted. 4. Name: The name, derived from Dolor, and Liber, suggests the claimed action of the preparation (the relief of pain) rather than the composition. 5. Irrational composition: It is quite possible that Libradol will relieve pain in certain instances, but this is no justification for the use by physicians of cataplasms containing or made from skunk cabbage, bloodroot, ipecac, melaleuca (oil of cajuput), lobelia, laurus camphora (comphor?), capsicum and tobacco. The combination is thoroughly irrational.

The Council declared Libradol inadmissible to New and Nonofficial Remedies because its composition is complex, irrational and semi-secret, and because its name and the unwarranted therapeutic recommendations made for it will lead to its ill-advised use (Rep. Council Pharm. Chem., 1920, p. 65).

ASPIRIN OR ACETYSALICYLIC ACID.—For many years the Council on Pharmacy and Chemistry, and the *Journal of the American Medical Association* have been urging physicians to avoid using proprietary names in prescribing drugs obtainable under a nonproprietary name. Two substances have been especially referred to in this connection, hexamethylenamine and acetylsalicylic acid. Many years ago, hexamethylenamine was found to be an effective therapeutic agent, especially as a urinary antiseptic. Since it was a well-known chemical it could not be patented. A commercial firm, however, seized the opportunity and coined the name "urotropin" and advertised it. As a result the proprietary name became so fixed in the minds of physicians that some still use it in their prescriptions instead of hexamethylenamine. Acetylsalicylic acid was patented and the trade name "Aspirin" coined for it by the predecessors of the Bayer Company. During the patent monopoly both physicians and the public became familiar with the term Aspirin. When the patent expired, physicians continued to prescribe Aspirin, even though the drug was available under its proper name, acetylsalicylic acid. Having acquired the rights to Aspirin the Sterling Products Company, under the name of "The Bayer Co.," has during recent years attempted to impress on the lay mind that there is no satisfactory aspirin, except Aspirin-Bayer. Recently a suit has been decided in which the Bayer Company sought to restrain the United Drug Company from selling acetylsalicylic acid under the name aspirin. The court holds that, since the public knows the drug as Aspirin only, the pharmacist may sell any brand of acetylsalicylic acid to the public when Aspirin is called for. On the other hand, manufacturers, pharmacists and physicians know the term acetylsalicylic acid and know that the term Aspirin was coined by the Bayer concern and hence, when a physician writes for Aspirin in his prescription only the Bayer product may be supplied. Physicians should avoid the term "Aspirin" and instead prescribe "acetylsalicylic acid" (*Jour. A. M. A.*, May 14, 1921, p. 1356).

THE JOURNAL

OF THE

Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

Volume XVIII

ST. LOUIS, MO., DECEMBER, 1921.

NUMBER 12

E. J. GOODWIN, M. D., EDITOR
3529 Pine St., ST. LOUIS, MO.

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ORIGINAL ARTICLES

THE NECESSITY FOR POPULAR MEDICAL EDUCATION IN MISSOURI AND SOME METHODS BY WHICH IT MAY BE SECURED*

F. G. NIFONG, M.D.

COLUMBIA, MO.

On former occasions I have been permitted to speak to this Association on matters which are of very vital importance to us. You have given me your attention and manifested your interest in the idea that the State should completely educate its doctors of medicine in the Medical Department of the State University and have considered some of the means by which this may be accomplished. You have kindly listened to my notions about giving more scientific and efficient medical service to our people and the function of our State in aiding this laudable purpose. You have even heartily endorsed through our house of delegates and council the project for the establishment of a state general hospital that we might better serve our people and also make possible complete medical education furnished by our State. You have memorialized our Governor and Legislature to this effect. In presenting these matters to you I have only indicated the great medical teaching service a State University may perform in spreading useful sanitary and medical knowledge to the entire population. This phase of the medical education problem demands more thoughtful consideration on our part because of the great value of popular medical knowledge to the whole people and because the increasing spread of truth about medicine will render our lot much easier and happier in the practice of our profession. This is why I think it an opportune time to bring this particular phase of the medical education subject to your

attention for your careful consideration. In the light of some recent events I think it should meet with your most serious thought.

I need not review to you the art of medicine as empirically practiced and handed down to us from the time of Esculapius. The mystic, the priesthood, religions, superstitions, a composite mass of ignorance and wisdom, virtue and vice, of the ridiculous and sane, all contributing to an art which has done wonderful service for mankind. We should find no fault with the Hippocratic oath and its noble altruism, but as a profession we have bequeathed to us many old practices, forms, and traditions which might well be dispensed with now. The first thing to go should be the Hippocratic idea that with us belongs all knowledge of medicine and that for the people it is enough that we serve them. It is high time now to "democratize" medicine. Many of you, my associates, have witnessed the evolution of scientific medicine during the last thirty to fifty years. More progress has been made since Pasteur than in all the history of the world before his time. Before that time we had a noble art, it is true, but since then has developed a proud science, an ever progressing and expanding science doing miracles for the world.

It is needless to recount the attainments of modern medicine to this audience, it is true, but too much cannot be told the laity of its wonderful accomplishments. If we receive proper appreciation as a profession and as scientists the people must be taught our value. Let the people know more and more of the accomplishments of modern medicine. Let them know our ideals and some of the sacrifices made by many of our scientists. Tell them of old Carlos D. Findley, of Reed, Carroll, Agramonte and Lazear. Show them that Goethal could go no further than DeLesseps without Gorgas. Tell them of the discoveries of the causes of disease, the romance of the transmission carriers. Teach them something of the plague, cholera, tuberculosis, leprosy,

*Read at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

typhus, typhoid, malaria, syphilis, gonorrhea and the whole formidable list. Tell them what has been done to conquer this army of disease and enlist their mass help in the battle. Tell them also very frankly of our strenuous and still unsuccessful efforts to conquer other maladies such as cancer and influenza. "The truth shall make us free." No longer are we an exclusive priesthood dispensing our blessings on the ignorant masses. Let us free ourselves from tradition's shackles.

Notwithstanding our frequent disappointments and the evidences that we have that the people are woefully ignorant in medical matters, I think we must conclude that the laity is gradually becoming more educated in things that are medical. I fear improvement is not due to our efforts as a profession. France, the most enlightened nation, once by an overwhelming popular vote gave a verdict that Pasteur was the greatest Frenchman of all history. Just now we are placing the name of W. T. G. Morton in a hall of fame after trying the vote with our beloved Mark Twain. That is looking forward and seems a hopeful sign.

But we are to speak specifically of Missouri. What are we doing as a profession in Missouri? Our recent retrograde medical legislation is a severe shock to us and causes us to hang our heads in shame. But if we believe in representative government we must conclude that such backward legislation can come only from ignorance and is largely our own fault. I feel positive that is the truth. What have we done as a profession to popularize medical knowledge? What organized efforts initiated by us have helped teach the laws of health and the elements of medicine, the foundation truths so easily taught. Let each one of you ask yourself how much thought you have given as to whether your patient or families were instructed about the truths of disease and the methods of keeping in good health. Most of us have contented ourselves with medicating them and leaving them as ignorant as possible about themselves. These better health and medical education laws have been secured for us by the strenuous efforts of only a few forward looking and very intelligent medical men. Stalwart pioneers they were and gave to us what we have been unable to maintain because we have not had the wisdom to fully appreciate their value and to educate our people. We must awaken as an entire profession to guard truth and maintain right laws and not leave this most important matter to a few men. That such vicious laws have been enacted by our legislature is indeed a severe reflection on us as a profession—on our intelligence and our standing in our communities. It should make each

of us resolve to do all in our power to remove this stigma and restore our fair name in the medical world.

And now comes the question, how may this be done. A battle with ignorance is an herculean job. Let us first prepare ourselves for it. Let us get rid of old prejudices and inherited traditions which may handicap us. Let us realize that the fundamental scientific medical truth is for all and the more that it is disseminated the greater the blessing for all mankind. We must abandon our priesthood and become fellow fighters against disease with farmers, business men, lawyers and all others who may enlist. No more should a doctor pose as a mystic or a being with superior knowledge that is not to be shared with others. It is time for him to become a teacher of truth. No longer is it a detriment for him to confess the things he does not know when he can balance accounts with the many facts which he does know most positively. It should now be his duty to teach his people, in every possible way, the laws of health and sanitation and the great scientific facts of medicine so far as practical. With a popular concerted effort on our part much may be accomplished in an individual way. Still more may be accomplished, perhaps, through the educational efforts of organized medical societies as well as through health promoting organizations composed of interested, intelligent laity friends. We should interest ourselves and our friends in this laudable educational effort in all our communities. With such a general awakening to the importance of the matter and this concerted effort it would not be long until we might restore our standards, lift up our heads and face the world again unashamed. With the spreading of truth and even elementary medical knowledge we may easily maintain just laws for health preservation and the medical education of efficient doctors. Quackery would soon be annihilated if truth were properly disseminated. The constant battle to preserve good health laws, once enacted, would not be necessary. Under such conditions the practice of our profession would become much more pleasant and more efficient. It is the truth about our science of medicine given to the whole people which shall give us freedom and when the next great war comes a different tale might be told about the fitness of our young men.

But to build substantially and for the future we must build on a firm foundation. It is the child who must be taught the laws of health and the elements of the science of medicine. The mind of the child is the virgin soil into which any truth must be planted and we can be sure it will grow and bear fruit more than a hundred fold in after life. Health lectures

should be given in all schools from the elementary on up through the grades and high schools. With modern methods of teaching the elemental medical facts may be easily taught even to little children. By visual education how enticingly the truth may be presented and how indelibly impressed on the mind of the child. So likewise similar teaching may be followed up all through the grades to suit the mind of the child being taught. And what enticing subjects, the romance of microscopic life, the carriers of infection, the armageddon of the bacterial world. The little child may see the filth bearing fly carrying the infective germ to the baby's milk, the mosquito bearing the malarial plasmodium. He may know the rat flea and the plague and associate the "cootie" and typhus fever in his mind. The primary child can learn better than an ignorant adult that typhoid fever borne in filth may be avoided. Can you conceive that in after-life such a child, even though learned in only these primary truths, can become a disciple of Mrs. Eddy or will retain a chiropractor to treat him for a fever. No truth is stranger than fiction and much more interesting. A friend (J. Kelly Wright) engaged in agricultural extension work often gives short health lectures to children as well as grown up folk in rural communities and he states that it is marvelous how greedily they drink in the health talks he gives them. Primer talks telling the laws of health and sanitation and how to avoid infective diseases. A personal experience in teaching college girls and some grown up women Red Cross work during the wartime was a revelation as to how avidly they drink in medical facts. No—the teaching is easy and not an extensive or wide scientific knowledge is needed but simply a primer of facts.

But you say whose business is this? This is not your or my individual business, although I can think of a no more philanthropic work for one who had the desire and the capacity. It could not be well undertaken by private institutions as it is a large contract. Manifestly the teaching can be done more efficiently as well as more authoritatively by the teaching agencies of the State. Perhaps one of the quickest ways to go to our district schools would be through teaching by our new county health officers. Not the least important of his duties should be health talks and instruction in how to prevent infections. He should teach the children the basic truths of medicine along with his inspections and looking after the condition of individual children. Health officers should give their whole time to this work and most valuable would be the teaching of it.

The motto of our State is, "The welfare of the people is the supreme law." What can

contribute more to the general welfare than measures to preserve the health of the people?

We have an educational system of which the University of Missouri is the crown. The University should be the source of all authoritative information and teaching. Through its agencies scientific information and facts conducive to the general welfare are sent out over the state. We have one department in the University which teaches not only the student in attendance but by so-called extension work disseminates authoritative information and scientific facts of incalculable value to all the farming industry of the state. And how is this extension work carried on? It is done by the publication of bulletins, by popular lectures, by farming demonstrations and experimentation, by correspondence, by helpful service in furnishing serum for hog cholera, by fighting insect pests and such like service. This service and this education is of inestimable value to agriculture and the general welfare of the state. And do you think there is no response to such service? The agricultural department is always liberally supported by our legislatures because the people have had its value clearly demonstrated to them. The people have been educated and know the value of this service and are willing to support it more liberally.

In our state motto we might truthfully make the welfare of the people synonymous with the health of the people and our supreme law. No laws and no service can contribute more to general welfare than medicine and when measured entirely from an economic point of view we may safely challenge any other science or profession.

We have also in our University a department for teaching the science of medicine. This department, I maintain, is of equal or greater value than agriculture and indeed has contributed much to agricultural science. We have now a department of preventive medicine and laboratories which if properly supported can be of very great value to the doctors and all the people of the state. The laboratories are the official laboratories of the state board of health. Just as agricultural extension work is carried on the medical department might carry on the educational and extension service by similar methods. This work can be done in a most authoritative way as no private institution may possibly do even with unlimited resources. Some of the methods by which the people may be educated is through publicity in county papers, the sending of health bulletins, popular lectures on health by extension men, inspections and tracing sources of infective diseases under the auspices of the state board of health and laboratory service

of physicians. Would such service and such a medical department be supported by our people and legislators? It would be done most certainly as is agriculture. Suppose, for example, a county has an epidemic of typhoid fever and our state board sends an extension man to investigate. He finds the source of infection. He lectures and advertises in the county papers showing how to get rid of it all and soon helps clear the situation. Do you suppose the legislator from that county will not see that the medical service from the University is provided for. The people will be educated and a definite response will follow such a demonstration of the value of medical science. After such demonstrations and such like extension has gone on for a few years "quackeries" and "pathies" and all forms of falsehood must fade away before the light of truth. The great economic value of good health service and health laws will be thoroughly appreciated and no longer will we have to make a constant fight to preserve such laws.

But if we might be permitted to approximate our ideal as I have tried to picture on a former occasion we would have popular health and medical education not only in all our primary and grade schools. We would crown our efforts by having a great medical service department in our University where we would train both our undergraduate and graduate doctors. We would promote popular medical education by every possible extension method. We would serve the doctors of the state with the best laboratory and consultation service. We would have a great state general hospital articulated with all our county and community hospitals for standardization and better service. We will have established many local community medical centers where the science of medicine may shed its light, where the truth will prevail and "make us free," and the welfare of the people will become the supreme law.

DISCUSSION

DR. A. W. MCALESTER, Columbia: I hope you won't dismiss this subject at once, if for no other reason than that it is timely; that we should clarify our own minds and should unify them. We will have to go before the public and we want to go as one man.

I do not propose to discuss this question extensively, but I want to call your attention to that hospital question. The counties all over this state are beginning to have hospitals—something that is appropriate and something that is needed. You are giving people better results. Now let us state things plainly. In order that we can advance at all, we must have a great deal of money and a great deal of talent in order to take a new step. A county cannot afford to make that equipment beyond what is practical for the ordinary cases that come to it. Now, what are you going to do? What is the duty of your state? If your state has any duty under

the sun, the duty is that it shall protect your life. Is that a correct proposition? And that it should throw every safeguard possible around it to do so.

You call out your armies when invasion occurs, but you have an invasion of the micro-organisms of today that is far more deadly than the guns. Are you going to sit back and hug a phantom of hope?

Things are going on in the United States today in which men of money are building great hospitals and putting in research laboratories. Is the State of Missouri so poor, with millions of people and billions of dollars, that she cannot afford you that opportunity? The United States government stands out as the wonder and admiration of all of us when you come to analyze the research work she is doing today in order to protect the American people.

Are you going to depend upon private donations rather than state aid? Where are you going to send your people? A rich man can go where he pleases. An average poor man must come to his state. Now, let's unify ourselves and stand for a State Hospital, that when this county hospital cannot give a case that attention which the science of today demands, let us have a place we can send these people, and let them go there. Don't let your state be a beggar and pauper upon its knees.

The state board of health conducts an examination for applicants who wish to practice medicine in Missouri, and lets them write it down, and asks them questions. What do you want that new doctor to do? You want to know whether he is qualified to take that sick man and go into that man's house. You ought to know that the mother's life is safe in his hands. You want that innocent babe that has been brought into this world to lean to your strong arm for succor. Take him to the obstetrical ward and tell him, "There is the patient." Tell him to come and make that report to this board in writing. Tell him to take that case of typhoid fever. Tell him to take the patient, examine him and report from start to finish, and see whether he is a finished doctor. What business has he practicing if he isn't finished? The state can only go to its own hospital for this purpose.

DR. ELSWORTH S. SMITH, St. Louis: It seems to me we must all realize the importance of the lesson Dr. Nifong has tried to impress on us. If nothing else would make us realize this lesson, I think the recent legislation—this pernicious legislation—should make us pause and think where we are drifting.

To think that this grand profession of ours has actually been put on the defensive by a lot of irregular aspirants to the practice, the science and art of medicine! In this recent legislation we were suddenly made to realize that we have to guard our guns to keep these irregulars from attempting to usurp our honorable calling.

Why has this come to pass? Because of what Dr. Nifong has said: the public has not been properly educated. It is not the public's fault. It is ours. We have not taught them to appreciate the difference between the scientific medical man and the irregular. The public does not know that when these chiropractors press the spinal column that it is nonsense. The same is true of osteopathy. They have not been taught that pulling the man's leg is not going to cure his pneumonia. The fault lies with us. We have been asleep at the switch, and this thing has come upon us as a tremendous menace.

How are we going to get this situation under control and crush it out? We are making a wonderful fight in this referendum, and we hope and pray it will be a success. If it fails at the polls it will be because we have not educated the public to appreciate medical facts and science and truths.

As Dr. Nifong has said, is the cow in the pasture

or the hog in the pen worth more to us than a human life? We appropriate large sums for agricultural education extension. It is time we were making a similar appropriation for medical education extension. Until we do that and make the public appreciate the difference between the scientific and non-scientific medical man, we must expect what we had recently in legislation.

The State University should be the first to take this up, because the health of the commonwealth is its paramount obligation. What are the products of the farm or of industry if you come home and find disease and death in your homes? The most important duty is the protection of the health of your homes. As I interpret the spirit of Dr. Nifong's paper, that is what he is crying for, and that is what he should get.

DR. F. G. NIFONG (in closing): Rather than take more of your time myself I would much prefer to hear a general discussion so that we might have a consensus of opinion on this most important matter.

With more time I should like to consider in detail two phases of this subject which even now are most pressing. How may we give health education and how may we best serve our people? Elementary health education is an urgent need for both city and country people. Medical service to our sick in rural communities is becoming a most difficult problem.

I am now a country doctor. Formerly I lived in the village of St. Louis, but now I live in the woods of Boone County close by the old trails road. I have had opportunity to know the great difference between medical service in the country and the city. I know what the people of the country places have to suffer and endure in contradistinction to the poor of our cities. Some of our authorities have claimed that the poor of our cities secure better medical service through our big clinics and hospitals than our rich people and much better service than our middle classes. But what can we say for the poor and even the well-to-do people in many of our isolated rural communities? They get the best that can be given by some self-sacrificing country doctor who travels miles to serve them. The doctor can tell you the story over and over, and the tragedy.

The problem of medical service to the rural communities is even more difficult than schools and churches and the lack of it makes country life much less desirable.

If the welfare of the people is our supreme law as the motto of our state indicates, surely it is time that our state government should exercise itself in whatever way it may to promote the general welfare. Health education and health service can contribute more to general comfort and happiness than any other one thing and this should be one of the chief functions of state government. It is an obligation of the state not only to furnish education in health to its people but the state should make it possible for every individual to obtain the best medical service both for rich and poor alike. It is not only an obligation but it is extremely good business. These country folk, so in need of health service, are the bone and sinew of our land. They are the producers of our food. What more need we say of them.

Now, when we speak of the obligations of the state do we mean that the state should serve its people with "socialistic" medicine? Should we have a "panel game" and contract practice by the state? No, it is just such vicious systems, so destructive to medical initiative and independence, that would be prevented if the state should perform its function

of education and systematic aid, especially to the country doctors. It is state aid and not state management of medical practice that is needed.

Good roads and county and community hospitals seem to be coming and are a partial solution of the situation. We have now three county general hospitals completed and under construction and it is hoped that more will follow very soon. They might well become social service centers and the nucleus around which will build everything pertaining to the health and general welfare of the community. They will make a higher standard for medical service and better doctors. They will greatly educate the communities in matters pertaining to health wherever they may be located.

But it is state aid that we want and such aid might best be secured through a State General Hospital. Primarily such a hospital will serve the people of the whole state, restoring the sick cripples and all classes of derelicts who have ceased to be producers. Its value as an educational agency is incalculable, not only enabling us to educate the doctor and the undergraduate but the laity as well. Such an institution, administered by a staff of the highest class medical men, employed for their full time by the medical department of our university, would give a service not found anywhere else in the world at present. Such a faculty with such a selected clinic would give us a medical school both for graduate and undergraduate work that may not be excelled. Such a school might educate our worthy indigent boys in medicine and turn them out to give back to the state many fold what has been given them. Such a hospital and such a school of medicine articulating and collaborating with our county and community hospitals, as well as keeping in touch with individual doctors of the state, will contribute to a great co-ordinated and systematized medical service all over the state. It might articulate and standardize our community hospitals. Laboratory work and consultations to the ultimate might be furnished. All the methods of extension service and education by such work may be used. In short, such an institution might well become a supreme court in medicine.

What should we do about it? We should go as an Association to our legislature and governor and ask for a State General Hospital. Last year we memorialized them to that effect. Now we should be more insistent. Let us have a great new eleemosynary hospital and let us not bother about its location. Let us have it administered by the medical department of the State University in the medical, surgical and laboratory work but let the physical maintenance be managed separately. In this way would politics be eliminated and efficiency conserved. Such a plan is feasible and practicable. Some of our neighboring states are adopting similar methods, Iowa and Illinois particularly.

Our Association has appointed a committee to draw a bill and bring this project before the next legislature. We should like to secure your best thought on the matter and get the composite wisdom of the Association if possible, and we solicit your thought and suggestions. We hope something will develop from this that will ultimately lift us from our slough of despond and place us on firm medical ground for all the future.

12 S. 9th St.

PHYSIOLOGY OF BLOOD IN INFANCY AND CHILDHOOD.—In a discussion of some of the modern lines of investigation of blood, William Palmer Lucas, San Francisco (*Journal A. M. A.*, July 30, 1921), indicates the various lines along which these problems can be attacked, and points out some of the achievements which have resulted from these studies.

HOSPITAL AND MEDICAL SERVICE IN RURAL MISSOURI*

GUY L. NOYES, M.D.

COLUMBIA, MO.

The recent country wide hospital survey by the American Medical Association has put in our possession certain facts regarding the hospitals of Missouri that enable us to make intelligent inquiry into the hospital situation and possibly also to reach some conclusions regarding corrective methods that should commend themselves to those interested in public health.

There is a shortage of hospital beds in Missouri. Over 75 per cent. of our counties have no hospitals at all. The fault appears to lie largely in the distribution of the hospitals. We have in the state a ratio of one hospital bed to 431 of population; the ratio for the United States is one to 340. St. Louis has one bed for every 171 and Kansas City has one bed for every 158 of population. Of all the hospital beds in Missouri 89 per cent. are located in St. Louis, Kansas City and St. Joseph. In other words, 60 per cent. of our population have access to only 11 per cent. of our hospital beds. To put it another way, two-fifths of our people have nearly nine-tenths of our hospital facilities at their very doors and the other three-fifths of the population have more or less difficult access to only about one-tenth of all the hospital beds. We have in the state approximately 8,000 beds, none of which may be done away with. Moreover it is obvious that we cannot bring about a redistribution of the beds that are already established. Nothing remains but to erect new hospitals where they are most needed. The situation in Missouri is particularly favorable for the organization of county public hospitals. There has been given to every county the legal right to build and maintain a general hospital.

It appears that the general shortage of rural hospitals and the relatively easy means of correcting this social fault should appeal particularly to every deputy health commissioner in Missouri. If rural Missouri can be made to see the benefits that will accrue as a result of the establishment of county hospitals, which shall function not only as general hospitals but as health centers in the best sense of that term, then rural Missouri will build the hospitals.

But the people must be taught to see wherein the benefits lie. In the public health program of every county where hospital facilities are inadequate there should be a hospital building project. Health officers and other doctors

should repeatedly present the facts to the people to the end that the rural dweller may be made to understand just how his present acute medico-sociological problems may be solved in part at least by the establishment of well-equipped, small hospital health centers on the country-side.

What are the medico-sociological problems of the country-side today? First, a shortage of doctors; second, a shortage of hospital beds. There is a most striking analogy between these two conditions. It has been pointed out that there is no shortage of hospital beds in urban Missouri but there is such uneven distribution of hospitals as to leave large sections of our state quite out of reach of effective hospital service. There is likewise no absolute shortage of doctors in Missouri, numerically speaking. We have one doctor for every 575 people in the state, while the ratio for the United States is one doctor to every 750. Only five states in the union have more physicians in proportion to population than Missouri. In spite of this we do know that from every section of rural Missouri there comes an appeal for doctors, and we know positively also that whole villages are without a medical attendant within such reach as may be reasonably expected for purposes of general practice, and it follows of necessity therefore that of emergency service there is none.

The larger cities appear to be over-hospitalized and they are also over-supplied with doctors. Roughly speaking, the ratio for St. Louis is one doctor to 450 and for Kansas City one doctor to 350 of population. The county-seat towns of Missouri have a ratio of one doctor to 300 people.

It appears then that there are relatively more doctors in the country than in the cities. But here the figures lead us astray unless we recognize that doctors who live in county-seat towns serve in reality, as best they can, the needs of about 60 per cent. of our people, most of whom live scattered at considerable distances apart and at points inaccessible from the county-seat for many weeks in the year. Any program for providing good medical service in the country must take account of road conditions, and relief that is to come from new hospitals and new doctors presupposes of course the advent of new and good roads.

In relation to the apparent insufficiency of doctors, the same fault appears as that noted in connection with the matter of hospital beds. There is uneven distribution of doctors and we cannot now allocate the doctors in a way to correct the obvious faults. We must provide new doctors for the country. If rural conditions as to medical practice, especially

*Read before the Second Annual Missouri Public Health Conference, Columbia, Missouri, June 20, 1921.

with reference to the condition of the high-ways and availability of hospital facilities, remain as they are at present no good can come from simply graduating more and more doctors, for they would tend to distribute themselves as they do now and as others have done for the past twenty years. We must bring about conditions of practice and of living in the rural districts that will satisfy in some degree the recent graduate of a first-class school. I have no sympathy with the proposal to supply a group of substandard or poorly trained medical men on the theory that they will in their unpreparedness seek the seclusion of the country-side and after all be "good enough doctors for the country." I would place a public hospital in every county—in some counties more than one—and by that means be able to give assurance to the recent graduate trained in the hospital wards and laboratories that he may go to the country to practice without relinquishing in any degree his ideals as to the quality of service he should render. I would so organize and equip county hospitals as to assure the young physician that his individual expectations as a medical practitioner need suffer no setback by reason of his residence in the country. I would give him every essential hospital facility and free access to it. I would assure him, further, of an alert and competent hospital staff companionship. I would dedicate every county public hospital to the proposition that every man, woman and child is entitled to health. I would make every county public hospital a health center in truth and proceed upon the assumption that of the people it is to serve some are born healthy, some acquire health, and that some must of necessity have health thrust upon them. Large and expensive hospitals are not necessary. Complete equipment for purposes of diagnosis and treatment is indispensable and yet easily obtainable by a county community.

County hospitals with proper libraries, laboratories and equipment will encourage young medical men to come to us in the country. Dr. V. C. Vaughan has recently pointed out that in the era just passed the armamentarium of medical men included no hospital or laboratory facilities and consisted entirely of the power to read carefully, think clearly and practice skillfully. That these attributes were as commonly possessed by the country doctor as by the city doctor is not denied. In fact, the evidence shows that a goodly proportion of the valuable original contributions of that era came from small town doctors. With hospitals such as are needed located in the country we shall again have significant contributions to medical literature as the result of the observation of country doctors. And more-

over we shall see a reduction in the rural death rate, which has been constantly ascending during the past twenty years in spite of the fact that the city death rate has not been increasing. What more positive evidence can one produce than the fact of increasing death rate to indicate the need for better facilities for diagnosis and treatment in rural communities.

The average age of doctors in Boone County is about 57 years, that of our lawyers and of ministers 42 years. There is evidence that in the rural districts the average age of doctors is about 60 years. We must have accessions to our ranks in the country. We as doctors must grasp this situation with understanding and solve the problem as one of public health. Unless we do this ourselves some other group of our citizens will do it for us and probably not in a way to best serve the public health nor to better the conditions of medical practice.

Such agencies as the State Board of Health and the State Medical Association should perfect an arrangement by means of which they may jointly give authentic and useful information to any community seeking advice regarding the building and maintenance of a public hospital.

Such an advisory group in Missouri should be qualified to provide information beginning with the facts as to the hospital enabling law itself, and on request should progressively guide communities through the processes of building and organizing their hospitals. These agencies should also give proper assistance in the education of the people regarding hospitals and they should support the isolated doctor, or other citizen, who has been moved by the desire to better his medico-sociological status by causing a public hospital to be organized in his county. This general plan appears to promise results in the shortest possible time.

We must have results soon if we as doctors are to continue to enjoy and to deserve our reputation as that of being the profession that serves unselfishly and with an eye singly to the public health.

THE TREATMENT OF BRONCHIAL ASTHMA
WITH AUTOGENOUS DEFIBRINATED
BLOOD*

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ST. LOUIS.

In the *Archives of Internal Medicine*, October, 1916, there appeared an article by Kahn

*Read before the St. Louis Medical Society, October 11, 1921.

and Emsheimer upon the treatment of bronchial asthma with autogenous defibrinated blood. They reported a series of six successive patients with this condition who showed definite improvement upon treatment. This was indicated by the diminution in frequency and severity of the attacks, gain in weight, increased ability to work and improved subjective symptoms. Their reasons for employing this method of therapy were based on the following theoretical considerations:

1. Asthma is due to a spasm of the smaller bronchi.

2. Spasm of the bronchioli in asthma is a manifestation of anaphylaxis.

3. This allergic phenomena may be explained on the basis of protein sensitization.

4. Whether the protein gains access to the body by the naso-pharynx, by the alimentary tract, or by any other portal, it is probably taken into the blood. If so, it should be found in the blood just prior to or during an asthmatic attack.

5. The rational method of active immunization in anaphylaxis consists of repeated injections of small doses of the causal protein. If the previous premises are true, immunization by repeated parenteral injections of autogenous defibrinated blood, obtained preferably during a paroxysm, should be beneficial.

Being impressed with the rational of their theories and the apparent benefit their cases derived from carrying out this method, I decided to apply their treatment to a series of cases.

The general practitioner in his daily routine frequently comes in contact with asthmatics. He is well aware from previous experiences with what difficulties he is confronted in endeavoring to give relief to these unfortunate subjects. He also knows that at most he succeeds in doing little more than giving temporary relief by the hypodermic injection of some drug, such as morphine or adrenalin. Finally, after frequent futile endeavors at giving relief, he as a last resort advises his patients to seek a change of climate.

Today we have learned that asthma is not a disease entity in itself but merely a symptom-complex of some oftentimes obscure underlying factor. It may be present in renal and cardiac diseases. It may be the result of focal infection somewhere in the body, or it may be, as Dr. I. Chandler Walker has so conclusively demonstrated, the result of sensitization to innumerable proteins; such for example as are obtained from foods, from the different pollens of various plants, horsehair, dust that is encountered in various occupations, etc. Therefore it would be logical and reasonable to assume that the proper way of treating such a case is to seek out the offending proteins, whenever it is possible or prac-

ticable, and then according to Walker's method, desensitize your patient to that particular protein. Often this is a simple procedure and then again the most painstaking research on the part of the clinician will fail to discover the causative factor.

In this series of sixteen cases which I wish to report to you this evening, practically no attempt was made at trying to identify the causative protein. The reason for this is that my first case in this series dates back to 1916, before I at least knew anything about Walker's work on this subject, and also later on, due to the expense attached to attaining a complete outfit of proteins for diagnostic purposes. I did, however, eliminate cardiac and renal types, also rule out any possible focal infections, such as carious teeth, infected tonsils, nasal and sinus infections.

All these patients gave a clear history of asthmatic attacks extending over a period of six months to thirteen years. Two of these patients were found to have syphilis, one a boy with hereditary lues; the other a female adult with acquired lues. Both these cases made complete recoveries after being placed on anti-luetic treatment. In both, however, the treatment for asthma seemed to diminish the frequency and severity of the attacks.

In order not to take up too much time with the detailed history of each individual patient I will give you a brief synopsis of the most typical ones in which the most marked beneficial results were attained.

CASE I.—Miss C. K., aged 45, single, domestic, gave a negative family and past history. Her present illness began seven years ago. While working in a laundry, was suddenly seized with an attack of dyspnea lasting several hours, accompanied with wheezing in chest, followed by expectoration and relief. Entered St. Mary's Infirmary about this time and remained several months. During this period patient had frequent attacks, usually coming on in the early hours of the morning. Attacks would last about two hours and sometimes a series of attacks lasting a day or two, unless relieved by medication. She gradually improved and left the hospital in May, 1915. Re-entered on December 14, 1915, with the same condition. She claimed relapses were due to catching cold. This patient remained in the hospital about two years, during which time she was more or less bedridden as a result of weakness and the recurrent attacks of asthma. She had lost about twenty pounds in weight. Physical examination on February 2, 1917, showed a well developed woman about five feet five inches tall, weighing about 120 pounds. Chest somewhat barrel-shaped, lungs revealed signs of emphysema. Heart sounds were normal. Urinalysis and Wassermann negative. Blood pressure 110 and 70. Differential white cell count revealed an eosinophilia of 13.6 per cent.

The first injection of autogenous defibrinated blood was given February 2, 1917, 25 c.c. subcutaneously in the interscapular space. This was repeated seven days later. On February 23, 1917, had an attack but not near so severe as before starting treatment. The injections were continued until March 17, 1917, until seven were administered. During this period

she had only one attack and gradually improved, feeling better, becoming stronger and putting on weight. Gained 15 pounds and left the hospital apparently cured, after having been an inmate for over two years. Three months later following a cold she had another attack. Reapplied for treatment and received three more injections. Thereafter, for over a period of three years, she has been in perfect health, has had no recurrence of the trouble and is now earning her own living.

CASE II.—M. S., female, age 23, single, came to me for treatment July 20, 1918. This patient's illness dated back to the time she was ten years old when she had her first attack of asthma. At fourteen had diphtheria, was given diphtheria antitoxin and since then has been subject to frequent attacks of asthma with almost daily occurrences. In December, 1916, was given this treatment about six times by her physician and was relieved from attacks until two weeks ago. Since then has had attacks daily usually coming on at midnight, lasting from thirty minutes to one hour. Physical examination showed a well nourished individual with eyes, ears, nose and throat negative. Teeth in good condition. Lungs showed a beginning emphysema with no rales present. Heart sounds normal. Urinalysis and Wassermann negative. An eosinophilia of 17 per cent. Patient was given ten injections at seven-day intervals. After third injection, she had no more attacks and has been in good health up to the present writing. Gained about ten pounds in weight.

CASE III.—G. S., referred by Dr. Wm. Weiss. Boy, aged 7 years, family history apparently negative. Had varicella and pertussis when four years old, parotitis at five and measles one year later. Present illness began at eighteen months with an attack of asthma, since then has had recurrences every six months. They usually came on at night about two a. m., lasting from one to three hours. Would have a series of such attacks extending over a period of two to three weeks and then suddenly cease. Examination showed a poorly nourished, undeveloped boy. The lungs showed the presence of moist rales throughout. The heart sounds were normal. Urinalysis negative. First treatment given on September 12, 1918; after three injections was greatly improved. Wassermann test made at this time was four plus. Put on antiluetic treatment while the injections were continued until ten were administered. He gained in weight and appeared to be cured. Up to the present time this boy has had no more attacks. It is interesting to observe in this case that the asthmatic attacks may have been due to the hereditary syphilis, although there was marked improvement in his condition after the first three injections. Blood tests of both parents and one other child all give four plus reactions, but no history of asthma.

CASE IV.—M. L., farmer, age 52, married, came to hospital in December, 1918, under Dr. F. Neuhoﬀ's service. Began six months ago with spells of spasmodic dyspnea and wheezing, usually occurring at night or after exertion. He has had four attacks in the past four days, clear mucus expectoration, sputum negative for T. B. Urinary findings and Wassermann negative. Family and past history negative. Examination shows a well nourished individual with a florid complexion. Lungs showed slight hyperresonance with occasional dry rales on deep breathing. Heart sounds normal. On December 21, 1918, received 20 c.c. of defibrinated blood subcutaneously. Repeated every seven days until ten injections were given. Patient immediately began to show improvement. Has had no more attacks and up to the present time has been in good health.

CASE V.—C. L. (Dr. F. Neuhoﬀ's), carpenter,

male, age 47, married, family and past history negative. Wassermann negative. Present illness began in June, 1917, with cough, tickling in throat and loss of weight. Was given creosote carbonate, improved and gained twenty pounds. Worked until November, 1917, then sick in bed seven weeks and had one smothering spell. Returned to work until June 5, 1918, when cough returned. On June 15, 1918, had another asthmatic attack, since then has had nightly occurrences for the past few weeks. Weight 147 pounds, eosinophilia of 7 per cent. Up to August 12, 1918, received ten treatments and showed steady improvement after fourth injection. One year later had gained forty pounds in weight and had returned to occupation as carpenter.

CASE VI.—A. R. (Dr. S. T. Vandover's), female, age 56, housewife, family history negative. Measles in childhood, menopause at 40. Good health until three years ago when she caught cold and had bronchitis. Improved under medical care, but had a relapse three months later. Thereafter attacks came on more frequently. Prior to November 5, 1919, she has had persistent attacks of asthma for five weeks. Constant and progressive loss of weight. Normal weight 150 pounds, present weight 120 pounds. Examination showed poorly nourished individual, moist rales throughout both lungs, heart sounds negative, Wassermann two plus. Leucocyte count 12,200. Eosinophilia 8 per cent. Was given ten injections of blood and .4 gms. of neosalvarsan. Since then has gained weight and has had no more attacks for almost two years. In this instance, syphilis may be considered as the possible etiological factor.

CASE VII.—Miss M. (Dr. O. W. Thie), female, nurse, age 29, single, family and past history negative. In the summer of 1914 began to have attacks of asthma which came on about four o'clock in the afternoon, lasting from six to ten hours at a time. Had them daily for a period of two weeks. Would last throughout the entire summer. Has recurrences every year until 1920 when she applied for treatment. Received first injection in July, 1920; given nine treatments. Complete relief after second treatment. Has had no recurrences since then up to September, 1921.

CASE VIII.—Mrs. A. (Dr. E. H. Henckler's), female, age 43. Present trouble began in March, 1919, with attacks of dyspnea coming on at night, gradually getting worse until now, July, 1919, she has them almost every night. Examination showed an under-nourished woman with carious teeth and pyorrhea alveolaris. Lungs showed moist rales throughout. Teeth were treated by dentist after X-ray findings. Began treatment in July, 1920. Received eight injections and made a complete recovery.

CASE IX.—Mrs. E. O. (Dr. E. H. Henckler's), female, age 50, widow, housewife. Family and past history negative. Began in 1918 to have attacks of asthma coming on during the early hours of the morning. At first at intervals of four or five days until, when I saw her, they were daily occurrences. Patient is obese, chest emphysematous. Examination of lungs shows chronic bronchitis. Began treatment in July, 1919; received ten injections. Made a complete recovery, no attacks up to the present time.

CASE X.—F. F. (Dr. A. F. Dames), male, age 21, married, salesman. Father suffered with asthma, otherwise negative family history. Since July 24, 1919, has had attacks of asthma for a period of three months, beginning at seven p. m. and lasting for several days unless relieved by hypodermic of adrenalin. Has had recurrent attacks every ten days. Prior to this has always been in good health. Examination shows a well nourished, robust individual. Heart and lungs negative except for wheez-

ing rales during and after attacks. Blood pressure 100 and 70. Wassermann and urinary findings negative. Received eight treatments and was greatly improved. However, five months later had another attack and received two more injections. Since then has had occasional spells but not so severe. Believes the treatment has benefited him although not entirely relieved.

CASE XI.—J. E., farmer, age 56. Began in 1916 with attacks of asthma coming on at eleven o'clock in the evening and lasting for three or four hours. Usually occur once a week. Now has them nightly, accompanied with paroxysms of coughing. Family history negative. Has always been in good health and never seriously ill up to beginning of present trouble. Examination shows poorly nourished individual weighing 123 pounds, lost 52 pounds in past four years. Chest emphysematous, pyorrhea alveolaris. Wheezing rales and rhonchi heard throughout both lungs. Received six treatments from September 16, 1920, to October 20, 1920. Has gained in weight. Attacks have greatly diminished and is virtually free from them at present.

CASE XII.—V. C., female, age 29, music teacher. Referred to me by Dr. Jno. McH. Dean, February 11, 1918, for attacks of dyspnea. Began when 17 years old. Seven years later began to have nocturnal attacks of dyspnea, at first six months apart until now they occurred daily for a month at a time. Usually come on at three a. m., waking up gasping for breath until relieved by taking an asthmatic powder. Has been losing weight for past five years. Appetite fair, no cough, no night sweats, no hemoptysis. Examination shows a poorly nourished individual with an arthritis deformans involving both upper and lower extremities. Has had this for past four years. Lungs show breath sounds slightly exaggerated, no rales heard, no impairment of resonance. Twelve treatments given between February 16, 1918, and June 3, 1918. Had no attacks until April, 1918. Since then has had attacks on an average of one or two a week, but much milder than before. This patient was benefited by the injections but did not become entirely free from attacks. Probably some focal infection which we were unable to discover would account for this.

CASE XIII.—J. B., referred to me by Dr. Neuhoff. Boy, age 8, entered hospital November 15, 1920, with history of asthmatic attacks for past six years, averaging about twenty attacks in a year. Last spell came on November 15, 1920, at three a. m.

with extreme dyspnea, high fever and profuse sweating. First treatment November 23, 1920. Eosinophilia of 10 per cent. Urinalysis negative. Was given eight injections. Left hospital December 25, 1920, and has been free from attacks for eight months until August 10, 1921. Is now under observation again. In this case the treatment has given more relief for a longer period of time than any other measure that has been tried.

CASE XIV.—B., referred by Dr. Dean, male, age 49, came to me with history of attacks of asthma for eight months following in the wake of influenza which he had in November 1918. He averaged fifteen to forty attacks per week. Examination showed a fairly well nourished individual with chronic bronchitis and emphysema. Blood pressure 125 and 85. The treatments failed to relieve his symptoms. I gave autogenous vaccine derived from his sputum which improved his condition somewhat but not entirely.

CASE XV.—D. P. (Dr. Dames), male, single, age 53. Has attacks of asthmatic bronchitis for two years, usually coming on after exertion and at night between one and two a. m., lasting from four to five hours. Examination of lungs showed chronic bronchitis and emphysema. Gave four treatments without any improvement.

CASE XVI.—W. T. S., male, age 60, with history of asthmatic bronchitis for past six years. For past five months attacks came on every night between two and four a. m., lasting about one hour. Gave four treatments but with no improvement.

METHOD OF TREATMENT

Since asthma occurs so frequently and responds so poorly to ordinary medication, this therapeutic method is one well worth giving consideration. The technique is very simple and can be carried out in any physician's office.

The apparatus used is a 25 c.c. Luer glass syringe, a rubber tourniquet, a four ounce bottle containing four or five glass beads, an ordinary medicine glass, and about six ounces of sterile saline solution (Fig. 1).

The tourniquet is applied to the patient's arm and 25 c.c. of blood is withdrawn from



Fig. 1.

the median cephalic vein (Fig. 2). Transfer this blood to the four ounce bottle containing the glass beads and gently shake it for ten minutes; that is, until the blood is completely

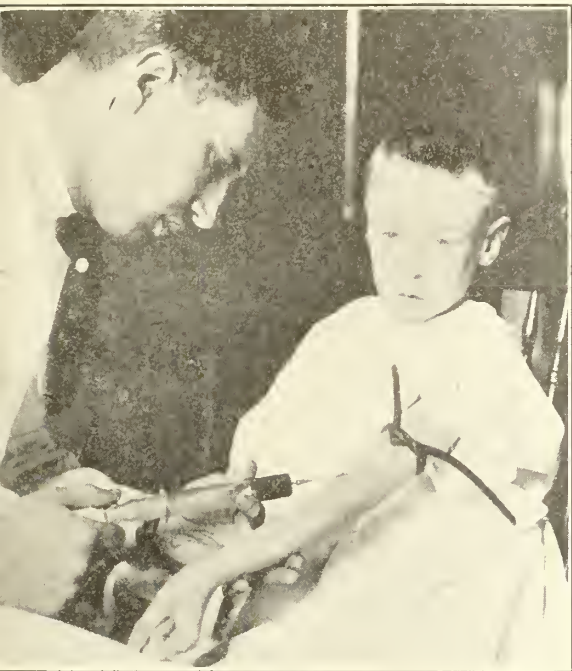


Fig. 2.



Fig. 3.

defibrinated. Then filter the defibrinated blood through sterile gauze into the medicine glass. After having cleansed your syringe with sterile saline solution, draw up the defibrinated blood and inject it subcutaneously into the interscapular space (Fig. 3), or into the abdominal wall. Repeat this treatment every fourth or fifth day until seven to ten injections have been made. If this method proves successful in a given case one will see marked improvement in the patient's condition usually after the third or fourth treatment. I give ten treatments. If there is no improvement after the third injection I discontinue. It requires about thirty minutes to carry out this procedure as just described.

COMMENT.

All the patients mentioned above have been observed by me for two to four years after their last treatment. The results have been satisfactory and better than any other method that I have used. I have learned that this treatment is not a cure-all. It has given permanent relief in 56 per cent., temporary in 25 per cent., and of no benefit at all in 19 per cent.

CONCLUSION

I. I am convinced that asthma is a symptom and not a disease entity.

II. The etiological factor cannot always be determined by our present methods of examination.

III. Some can be cured by the injection of specific antigens, as Dr. I. Chandler Walker has so clearly shown.

IV. A large percentage by the injection of autogenous defibrinated blood, as I and others have demonstrated.

V. Asthma is a common symptom of syphilis and tuberculosis of the respiratory tract and this must be kept in mind when treating this condition.

VI. The technique of injecting autogenous defibrinated blood is so simple and yet so beneficial that I could recommend it as a specific in many cases and an adjunct in all cases.

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THE NEURO-PSYCHOSES OF WAR AND PEACE*

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The medical man in civil practice has long recognized certain types of nervousness, so-called functional neuroses and neuro-psychooses as important causes of disability among his patients, but it is only in modern times that the

*Read at the 64th Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24, 1921.

military surgeon has been concerned to a major degree with these disorders of the nervous system as causes of disability among those in military service. No report was made of them either during the period or following the Spanish-American or South African Wars. They were manifest to a sufficient degree to attract the attention of military surgeons during the Russo-Japanese War. Some reports were made concerning them at that time. Very early in the World War these conditions became one of the major medical problems of the medical corps of all armies engaged, and so many men were disabled by their operation as to seriously impair the efficiency of the fighting forces. Because of their occurrence during this war and their non-occurrence in previous wars, we must assume that they are either associated with modern methods of fighting, or that the modern military man has not the carrying capacity or the ability to meet difficulties and adjust himself normally to them as had his predecessor. Because of these nervous disorders developed in the case of so many men who gave a history of having been concussed or exposed to the explosion of large shells, the English neurologists designated them generally as shell-shock.

Much was written in the lay and medical press concerning the condition known as shell-shock, and many people conceived the idea that a new disease had been discovered, but when our Uncle Sam took a hand and sat in the game, his neurologists in military service agreed upon the term of War Neuroses as applicable to all of the neuro-psychoses occurring among the troops in the American Army, and decided upon a classification which is as follows:

1. Neurasthenia, a neurosis in which there is easy fatigueability plus irritability of the nervous system.

2. Psychasthenia, an acquired or inherent inability to decide or to be satisfied with choice when made, plus doubt, phobias and depression.

3. Hypochondriasis, a neuro-psychosis the chief symptoms of which are lowered threshold to internal or external sensory impressions which occupy to an abnormal degree the field of consciousness.

4. Anxiety neurosis occurs most commonly among men occupying positions of importance and is chiefly manifested by conflict of emotions and ideas. Such patients are impelled by the ideas of duty, but are restrained by the fear of failure and ideas of incompetency.

5. Hysteria, manifested by primary disassociation, processes in consciousness, and objective manifestations of ideas of disability. A condition which can be produced and re-

moved by persuasion. The two principal types being conversion hysteria and anxiety hysteria.

6. Concussion syndrome: symptoms are unconsciousness, stupor and confusion.

7. Concussion neurosis; a neurosis or neuro-psychosis resulting from cerebral concussion, or as the French call it, "commotio cerebri."

8. Gas neurosis, a nervous disorder following gas-poisoning with symptoms of huskiness, dyspnea, sense of discomfort, burning sensation in throat and taste of gas.

9. Effort syndrome, a condition which the British term D. A. H., or disordered action of the heart. The principal symptoms are rising pulse rate after effort, dyspnea, precordial pain, and a feeling of physical and mental depression.

10. Anticipation neurosis, a neurosis or neuro-psychosis resulting from fear and anxiety of being exposed to danger, timorousness.

11. Exhaustion syndrome, state of extreme fatigue resulting from overstress, exposure, and inadequate food, rendering the soldier unable to longer carry on.

12. Exhaustion neurosis, a neurosis or neuro-psychosis resulting as one of the sequelæ of exhaustion.

All of the war neuroses disabling military men have their analogy among men and women engaged in peaceful pursuits and are responsible for much disability among the civilian population. It is not possible to estimate the percentage of civilian population that are partially or completely disabled because of neuro-psychoses, but that it is very high all neurologists are agreed. Some attempt has been made in military practice to arrive at an approximate estimate of the percentage of soldiers so disabled. The surgeons of the British Army estimated that one-fifth of all men discharged from the British Army or hospitalized because of illness, had some form of neuro-psychosis as a cause of the disability. In all the armies engaged the percentage was likewise very high. That these disabilities among our troops have not been temporary in character is evident by the large number who are alleging residual disability and asking that they be compensated for these disabilities even at the present time, a period of more than two years after the close of the war.

For more than a year I have been making neurological examinations at Kansas City for the Public Health Service, and an analysis of 685 cases shows that 401 claim compensation because of disability caused by some form of neuro-psychosis.

The neuro-psychoses of the war disabled many in service because of their disinclination or inability to adequately meet their difficul-

ties of a military nature, some of these who reacted with a neuro-psychosis have been able to re-establish themselves in society, to adequately meet difficulties of civil pursuits and have fully recovered from their disability, but in a considerable number of cases none of these results have been accomplished, and they continue partially or totally disabled, unable to follow any gainful occupation, either being supported by relatives, having failed to obtain compensation, or are receiving compensation, or are being cared for at Government hospitals. Many theories have been advanced as to why there was such an epidemic of neuro-psychoses affecting men in military service during this war. Some of the external physical causes were the great number of high explosives used, the large quantity of noxious gases to which the soldiers were exposed, the intensity of the fighting, the exposure, and exhaustion resulting from the soldier carrying on for many hours without adequate food or rest.

The effect of high explosives upon the nervous system may be divided into four classes:

First, immediately fatal either with or without physical injury; second, cases in which the detonation of the high explosive caused injuries to the body, including the central nervous system, not immediately fatal, but from which death later results; third, cases developing a neuro-psychosis as a result of the concussion which may range in degree from very slight to most severe; fourth, cases who following concussion do not manifest neurological symptoms.

Men who have been exposed to high explosives suffer not only from the effect of the concussion of the cerebrospinal fluid, the commotion and disassociation of the neurones as a result of the sudden atmospheric depression with its enormous dynamic pressure, but also from CO poison of which the gases generated by high explosives have so great a percentage. Some of the intrinsic predisposing physical conditions are defects and weaknesses of the gastro-intestinal system, a neuro-circulatory asthenia, and an unstable condition or disharmony in the endocrine system, such as an irritable thyroid predisposing to hyperthyroidism with secondary thyroid exhaustion and hypothyroidism. But perhaps the most important physical factor is the habit of drawing on the reserve of neuro-potential, being unable, through insomnia or sleep disturbed by terrifying dreams, worry and anxiety, to restore the normal balance and return to the normal condition of automatic renewal of nervous energy as fast as it is used. Physical shock accompanied by horrifying circumstances causing profound emotional shock and terror, which is contemplative fear, or fear

continually revived by the imagination has a much more intense and lasting effect on the nervous system than has simple shock. Much of this disability was and is wishful-filling in character. This wish may be conscious or unconscious. We all have our difficulties to meet and to all the realities of life at times become painful and distressing. In order to escape the painful realities and avoid these difficulties, certain individuals react with a neuro-psychosis. This is equally true of those engaged in civil as well as military pursuits. But in the case of the man inducted quickly from civil into military life there are presented to him reasons good and sufficient which influence many to wish to escape from the realities through the door opened to them by a neuro-psychosis. Primitive man was brutal in his instincts, gloried in deeds of violence and bloodshed. The most popular man in the tribe or community was usually the most violent man, and he who was most successful as a killer of enemies. The teachings of social civilization had educated such ideas out of the modern civilian. He had been taught that deeds of violence were not only to be condemned, but punished as violations of the laws of his state. The killing of his fellow-men was a major crime, punishable by the forfeiture of the life of the killer, but when he was asked to go through a process of sublimation which set aside the teachings and practices of generations of his ancestors, and enter an occupation in which he must suppress the idea that all humanity was his brother and should be loved as such, that instead of being a good Samaritan who binds up the wounds of the injured, he must mangle and mutilate his fellow-men, that in order to succeed as a soldier he must be a successful killer, that while so occupied and doing the things against which his whole nature revolted, he must be subjected to shell fire, machine gun fire and noxious gases with which the enemy was trying to mutilate and kill him, and at the same time surrounded by the mangled and dead bodies of his comrades. From a situation of this sort there naturally arose a desire for a means of escape. In many cases a neuro-psychosis developed as an anticipation neurosis in the training camp, port of embarkation, on the transport, or after landing on the other side, but in the majority of cases the soldier was able to carry on until he entered the front line trenches, and some for many days in the fighting zone before the break came.

Those developing a neuro-psychosis were individuals who were unable to lift the depression of the primitive instinct which took delight in brutality and savagery and sublimate the instinct so that it would no longer be repugnant to them. When war sublimation

failed the individual sought for something to relieve him of the necessity for fighting. This sublimation did fail with many and a neuro-psychosis appeared.

Fear also is an important factor in the development of a neuro-psychosis and the duration of the fear reaction is of much more importance than the initial intensity. If there is not a quick recovery from the initial fear, a super-fatigue ensues and results in disabling symptoms. Fear is the most depressing and exhausting of all the emotions, and the toxic products of a neuro-psychic fatigue induced by fear are of great significance in causing a neuro-psychosis. Prolonged fear of insanity, paralysis, heart disease, cancer, etc., as so frequently seen in civil practice also acts as a most potent etiological factor of various neuro-psychoses. Anxiety neurosis among the military forces was almost entirely confined to the officers because of their greater responsibility. The first abnormal symptoms manifested were feelings of irritability, fatigue, difficulty of concentration, and jumpiness. They felt the urge of duty but an inability to perform. I had two commissioned officers under my care who had been promoted from the ranks, who begged continually to be demoted and returned to the ranks because they considered themselves incapable of performing their official functions. In civil practice we find anxiety neurosis in its pure state usually developing in the case of individuals with large responsibilities. They, too, have mental conflict, they are driven by ideas of duty to carry on, but are restrained by a feeling that the difficulties of their business or occupation are too great for them to master.

The hysterias as a cause of both war and civilian disability are most important. Hysteria has been defined as a condition which can be produced or removed by suggestion. Conversion hysteria, which is a transference of an idea of disability to some of the somatic tissues is of frequent occurrence. Hysterical aphonia was one of the most common manifestations of conversion hysteria among troops. It usually occurred in the case of men who had been concussed or gassed. If properly treated it is of short duration. I saw many men returned from the front with hysterical aphonia. On the boat coming home I found three men who had not spoken above a whisper for three months. All regained their normal powers of speech after treatment varying from thirty to forty-five minutes. This condition is also of frequent occurrence among civilians who have been emotionally disturbed. I recently treated two women, one who had not spoken above a whisper for a period of seven weeks, and the other for a period of six weeks. Both recovered

their power of speech after treatment of less than an hour's duration. Conversion hysteria may cause blindness, deafness, all forms of paralysis, disturbances of gait, tremors of all degrees, anesthetics, paraesthetics, and all forms of visceral dysfunction, and in practically all cases it is wishfulfilling in character. Many ex-service men have mythomania which helps to keep alive a neuro-psychosis. In order to keep the interest of the public, get the sympathy of their associates and be honored as heroes, they greatly exaggerate their experiences and injuries, and in the frequent relating of them they steadily increase in magnitude until the relator himself comes to believe them to be true. This is also true of many civilians who have been injured or had unhappy experiences.

Under the name of *sinistroses*, Brissaud describes a neuro-psychopathic condition which promotes the development of neuro-psychoses both among soldiers and civilians. This condition is very prevalent among service men who for any cause have become disabled, also among workmen who have been injured while employed in railway or in street car accidents or by automobiles, etc. Such individuals feel that they will not be as efficient as they were before they were injured, the mind becomes concentrated on the injured part, much pain is experienced that has no physical foundation, the soldier begins to worry about his compensation to which he believes himself entitled, the civilian about claims for damages, they become mentally distressed, do not sleep well, claim that they will never be well again, or capable of resuming any gainful occupation. They believe themselves badly treated and are usually dissatisfied with any adjustment which may be made of their claims, and continually complain of their ill-treatment. They are called *sinistres* and wherever found are disturbing factors, stirring up much dissatisfaction in hospitals, among legionnaires, Red Cross workers, etc.

In treating neuro-psychoses of war or peace it is necessary to recognize that the individual patient may, and usually does have either by inheritance or acquisition, some physical basis as one of the fundamental causes of the nervous disorder, and a careful physical examination should be made to determine what physical defects are present, and then it requires some judgment on the part of the physician to correctly decide whether or not such defects found are contributing factors of the neuro-psychosis. Many self-styled diagnosticians are very prone to conclude after an examination of any patient having a nervous or mental disorder that any physical defect found is the cause, and its removal or correction will effect a cure, or not finding physical defects,

the patient is advised that there is really nothing the matter "so just go away and forget it," and many patients are made much worse by an examining physician who places too much stress on minor physical defects, and over-emphasizes their importance to the patient. The attention of the patient being abnormally attracted to them greatly increasing the terrifying introspection which is one of the most distressing symptoms. In brief, it is desirable for the physician who presumes to examine and treat neuro-psychoses, to have and use a high type of judgment, also be diplomatically patient and have a well guarded tongue. If there be pathology it should be corrected.

In all cases of neuro-psychoses there is an abnormal mental state. Many of them have an inadequate personality, or a constitutional psychopathic inferiority. The majority of them are lacking in resiliency. We have lead men and rubber ball men. If you drop a slug of lead in a hole it stays there unless lifted out, but if a rubber ball be dropped in a hole, if the hole be not too deep, it will bounce out, and so it is with many individuals. Some can bounce out of any kind of a hole while others have no bouncing qualities at all. The wise physician can with words of wisdom put rubber in the tissues of the lead men. There are many individuals who are continually spoiling a perfectly good day by living historical or prophetic lives. They blind themselves to the joys of today by throwing into their own eyes the dust of the troubles of yesterday or of the disasters which may overtake them tomorrow. This type frequently reacts with a neuro-psychosis. They must be taught how to live today, to suppress the memory of the sorrows of yesterday, and to await and prepare to meet the issues of tomorrow and not fly to meet them on the wings of fearful anticipation. Psychoanalysis can be used both as an instrument of diagnosis and as a therapeutic agent. With it the diagnostician can ascertain the psychic level of his patient, and uncover submerged painful complexes. With its aid the therapist can raise the psychic level and aid the patient to a normal adjustment.

Ex-service men who are suffering a residual disability because of a neuro-psychosis should be hospitalized in special hospitals where they can be re-educated both mentally and physically. Endocrine dysfunction should be treated in accordance with the needs of the individual.

Conversion hysteria must be treated by persuading the patient that his disability is the result of an idea of disability and not due to a pathology of the organ or tissues involved. Good nourishing food, abundance of water and alkalies, rest and conservation of nerve

energy are also important. If the patient is distressed about insomnia, hypnotics may be given, but bromides should not be given in large quantities. They are not hypnotic.

Iron and bitter tonics may be given in most cases. If the patient is much depressed he should be safeguarded against self-injury. It is usually advisable to remove the patients from home environment as they do better away from sympathetic friends.

DISCUSSION

DR. C. R. WOODSON, St. Joseph: Dr. Robinson's paper is interesting, but I must say that many of the terms now in use by the army surgeons and the workers on war risk bureaus are a little confusing. Neuro-psychiatry is a nice thing to talk about. Neurasthenia we have been reading about and studying in damage suits, as suggestibility has much to do with bringing out all of the symptoms.

Neurasthenia—the plain English of it can be said in a very few words—is a tired nervous system. Nobody has ever gotten beyond that. And psychasthenia—a tired mental system; and psychosis. We can use these terms, but when we go to the bedside with a brother physician and say, "What is that?" it does not satisfy.

We have in the war risk applicant today as great a desire for his compensation as there was for a pension in the late civil war. And those of you who have seen the applicant before such pension board remember that the face is long and the step feeble, with a crippled appearance, and after he gets out he laughs more and talks better. I see many of these war risk patients who feel badly when they come in and look badly, and a good many of them are in a bad condition, but in many instances they blame the Department for not having done something before, when they have just applied for compensation and have not yet gotten a compensation number. There are others who are entitled to compensation.

The shocks and concussions are much like we have been having always. I fancy shell shock is a very serious thing, but when they get pretty well, as the doctor says, they talk about it. They dwell upon the subject and sometimes add a little to it, and they often become a little hysterical, and we may say that hysteria is an emotion of psychosis, and it is the same today that it was fifty or a hundred years ago. We need to treat it better. It is brought on by suggestibility and cured by suggestibility—a positive assertion that there is nothing serious unless there is some cause behind it. If there is, it is not going to yield to treatment until the cause is removed.

But, gentlemen, there are a large number of men who went into the army who had a pre-war state of neurosis. Having lived here in this county many years, it was my privilege to see men's sons going who I knew were not right themselves—with a strong ancestral taint many of them went—and perhaps it could not be helped—who had a neuropsychiatric condition—and compensation is paid to a large number of men who, had they been diagnosed and kept at home, the department would not have to assume that responsibility. But they are not to be blamed for wanting compensation. They did not want to go. In many instances they stated they had been broken down by chronic alcoholism. But they were rushed off, and I think it is right they should receive compensation.

X-RAY FINDINGS IN CASES OF PAINFUL BACK*

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ST. LOUIS

Pain in the lumbar and sacro-iliac region, frequently accompanied by pain along one or both sciatic nerves, is a common complaint. It may result from a number of causes, medical, surgical, gynecological, genitourinary and orthopedic. The more common orthopedic causes of backache, omitting diseases of the spine, are faulty posture, in which there is usually a relaxation of the abdominal muscles with a compensatory lordosis; injury to lumbar muscles and ligaments; occasionally flat feet; osteoarthritis of the lumbar spine and sacro-iliac joints; strain of the sacro-iliac joint and more rarely an actual displacement of this joint; congenital abnormalities of the lumbo-sacral and sacro-iliac region. The last of these is the subject of this paper.

Various anomalies in the fifth lumbar and lumbo-sacral region have been described, and at present there is quite an extensive literature on the subject. Goldthwaite was the first to call attention to the long transverse process of the fifth vertebra, and he has reported cases in which it impinged upon the iliac crests, and in some cases, on dissection, a true joint was found. Variations have also been noted in the body of the fifth lumbar vertebra. These conditions have frequently caused a persistent backache, often following a strain.

A careful study was made of three hundred X-ray plates of patients suffering with backache seen in the Orthopedic Clinic of the Washington University Medical School. This study proved most interesting and I wish to illustrate some of the more common conditions found.

The lumbosacral region can be divided into three distinct types. In Type I the sacrum is fairly high between the ilia and is fairly broad horizontally. The upper border extends to, or a little beyond, the iliac crests before it curves to form the line of the sacro-iliac joint. This is a type common to both males and females, in about equal proportions. It is also transitional with characteristics of both the other types.

Type II (Fig. 1) is very distinctive. The outlines of the posterior spines of the ilia are sharp and angular. The general impression is that the sacrum is narrow and is set low between the crests. The line of the sacro-iliac is well beyond the shadow of the crests, and there is a distinct tendency to asymmetry. This is almost exclusively a male type. In Types I and II, the shadow of the transverse process of the fifth lumbar vertebra frequently overlaps the shadow of the crest of the ilium.

Type III (Fig. 1) somewhat resembles Type I, but the sacrum is wider; the curve of the sacro-iliac begins before it crosses the shadow of the ilium, so that there is a distinct notch. In this type the shadow of the sacro-iliac is more shallow than in Types I and II. The sacrum seems to be set higher than in the other types, and as a consequence the shadow

*Read before the St. Louis Medical Society, March 15th, 1921.

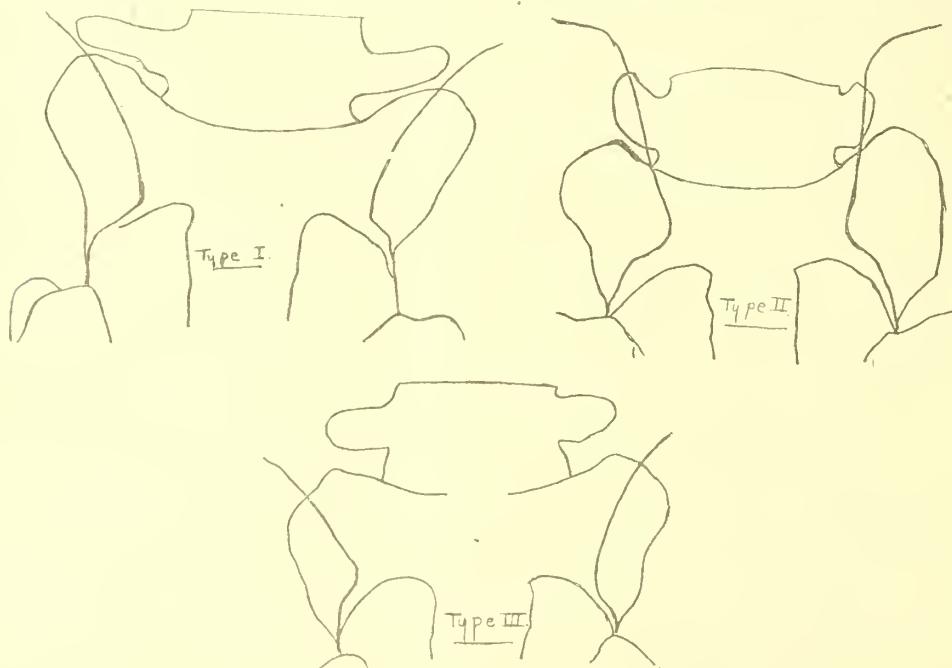


Fig. 1.

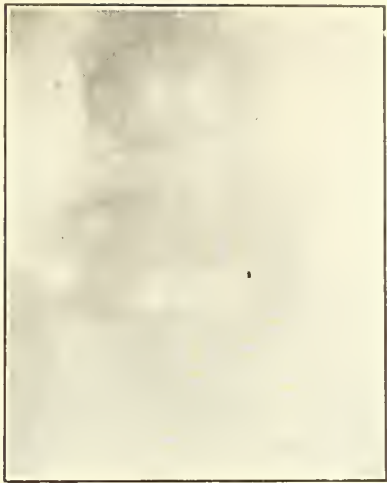


Fig. 2.



Fig. 3.



Fig. 4.

of the fifth lumbar transverse process does not overlap the shadow of the crests of the ilia. This is a female type. All these types show considerable asymmetry.

An X-ray of Type I is shown in Fig. 2 and might be considered fairly normal. The transverse processes are practically symmetrical and do not overlap the shadow of the crests.

Type II is shown in Fig. 3. Here the transverse processes distinctly overlap the shadows of the crests of the ilia and they are slightly hook-shaped. In this X-ray, which is shown as a fairly normal representative of this type, the space between the fifth lumbar vertebra and the crests is almost equal. In a number of cases, however, there was considerable variation in this distance.

Fig. 4 shows Type III. It will be seen that it is quite similar to Type I, but shows the

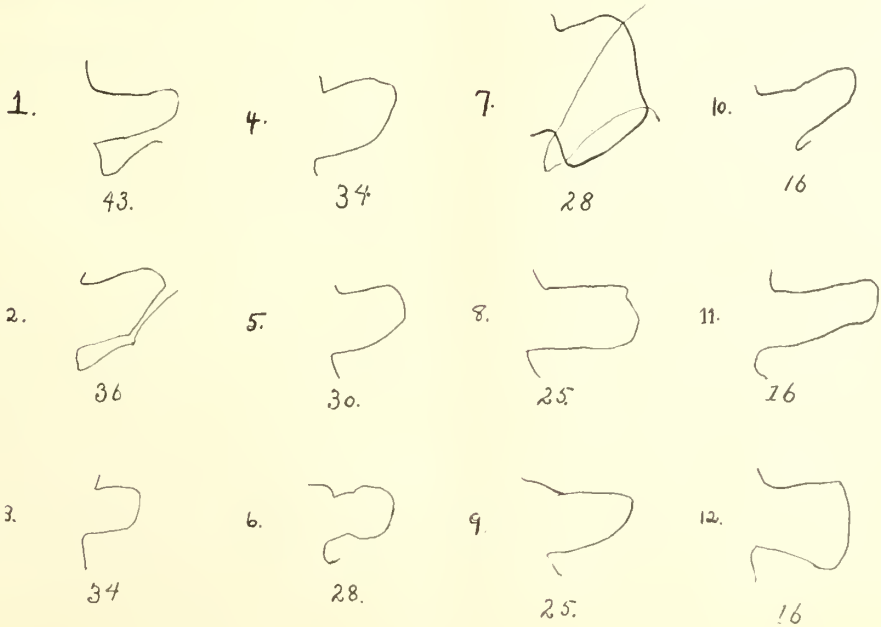


Fig. 5.

notch distinctly, and also shows the transverse process higher than in the first type.

The transverse process of the fifth lumbar is very interesting, and in cases studied showed a great variety in shape, and a very marked asymmetry. In very few cases were they alike on both sides. They can be divided

the ilium, and suggests the possibility that it is in such close proximity to the crest that its shape has been modified by it.

Fig. 7 shows some of the less common variations, and illustrates the great variety in shape. There were only 53 in 199 tracings in which the transverse processes were alike on

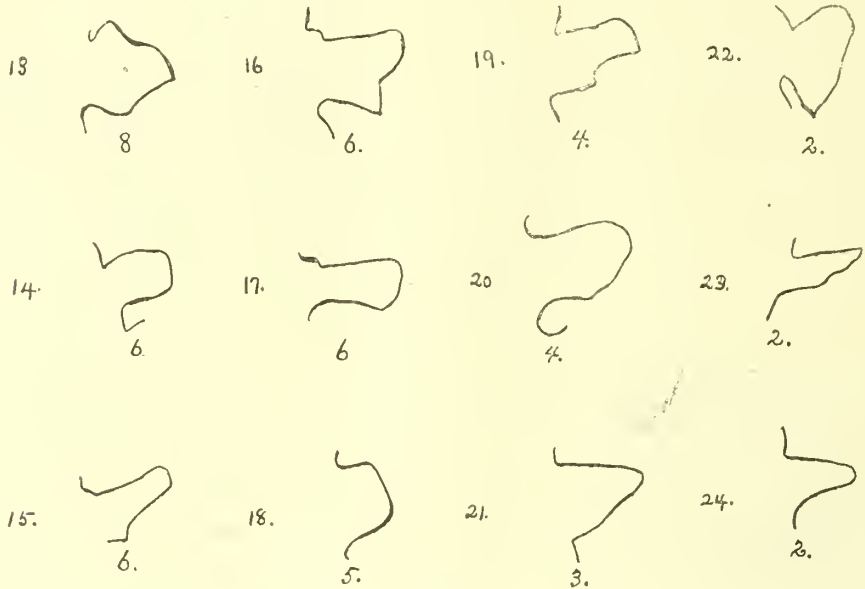


Fig. 6.

roughly into three general shapes, straight, bulbous and large fan-shaped, but with many variations. Figs. 5 and 6 show tracings from the X-rays of the more common forms; these are arranged in the order of their frequency. No. 1 might be considered the ordinary conception of the normal. No. 2 is curved so that it seems to follow the shape of the crest of

both sides, and even these showed some asymmetry.

We must remember, however, that the X-ray gives a flat picture and that it is almost impossible to say, even with a stereoscopic picture, whether the apparently overlapping transverse process really impinges upon the ilium or not. My belief is that in the majority

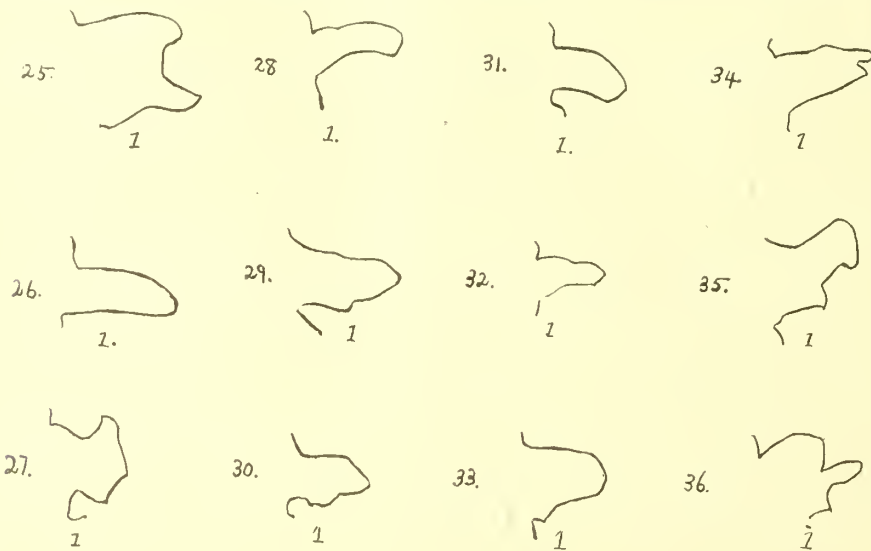


Fig. 7.

of cases they do not, and that a transverse process which is of practically normal size does not in most cases cause backache.

There are many cases, however, in which the transverse processes show a very marked variation in size and shape, and they, I believe, have a distinct influence in causing painful back. Fig. 8 shows a large, fan-shaped process on one side which seems to articulate with the sacrum. Fig. 9 is similar but bilateral.

be made out, but in which there is marked confusion and asymmetry in the lumbosacral articulation. It is difficult to say whether these variations are responsible for the backache in which they appear, or are only incidental anatomical variations, discovered because the patient has been X-rayed for a backache which resulted from some other cause. We know, however, that a large transverse process may cause a very persistent backache,

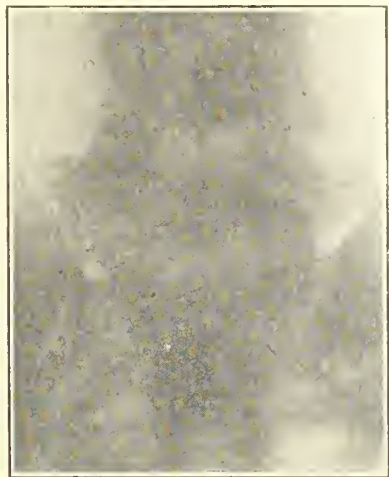


Fig. 8.

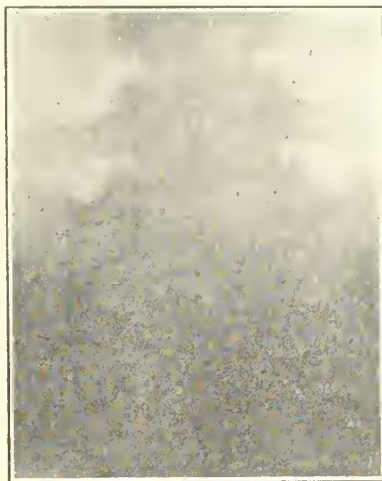


Fig. 9.



Fig. 10.



Fig. 11.

The process is apparently fused with the sacrum. The transverse processes of the fourth lumbar are also very long.

Abnormalities and congenital malformations are also fairly common. One of these which was seen in 6 per cent. of the cases studied, is bifurcation of the first sacral spinous process (Figs. 10 and 11).

There is also a large number of cases in which no definite congenital malformation can

and that at times it is necessary to remove the offending process in order to relieve the pain.

To determine whether these anatomical variations are found only in cases of backache, I have been studying X-rays of people who have never had back trouble. As yet I have not collected enough cases to reach any conclusion, but out of 22 plates examined so far, eight were normal and fourteen showed varia-

tions corresponding to the types described above. Four of these showed distinct abnormality.

Summary.—The lumbosacral region is one which shows a marked variation in the X-ray plate. There are three fairly distinct types; a mixed type seen in men and women, a distinctly male type, in which asymmetry is more common than in either of the other two types; a female type in which the sacrum is high and with a distinct notch between the shadow of the alae of the sacrum and the ilia. Overlapping of the transverse process of the fifth lumbar is common in the first two types and almost entirely absent in the third.

The transverse processes of the fifth lumbar, though roughly of three shapes, straight, bulbous and fan-shaped, shows very many variations, and they are usually asymmetrical.

Anatomical variations and malformations are common, but it is impossible to tell whether they cause backache or not, as they also seem to be fairly common in persons who have no back symptoms.

I believe, however, that these variations cause a potentially weak back, and that they will, sooner or later, induce definite back symptoms.

3534 Washington Avenue.

MEDICAL ETHICS AND IDEALS*

N. M. WETZEL, M.D.

JAMESON, MO.

Medicine as an art has been handed down from generation to generation, and if you will go back with me through the pages of time when the Hippocratic Oath was taken by young men before beginning the practice of medicine we can see by that oath that medical men already had ethical manners as well as high ideals of what a practitioner of medicine should be and do.

I believe that our great medical schools of today would do well to revise this oath, and require all graduates to take the oath before granting them a diploma. This is a progressive age with all our environments and opportunities for pushing onward and upward in our great profession. No other calling or profession has such a record of constant and unselfish devotion to suffering humanity.

Every great movement for the welfare of humanity is being instigated for the promotion of health and vigor and is carried to success even to its own great financial loss, and often in the face of bitter opposition from the very ones who would be most benefited.

The entire pathway of medical research and progress is marked by the bloody footprints of the martyrs of science in the advancement of medical ethics and ideals—martyrdoms as lofty as any the church or any organization can boast.

Vesalius was persecuted and censured severely because he dared to study the dead body that he might better know and heal the living. Jenner was ostracized and pictured as a devil because he discovered that vaccination would prevent smallpox. Harvey was described as an infidel because he discovered the circulation of the blood. Jeffries was threatened to be mobbed because he advocated surgery and scientific anatomy. Flexner and others have been branded as monsters. Carroll, Lazar and others died to prove the cause and secure the prevention of yellow fever, and now the great fight is on to destroy the awful White Plague, to minimize and to wipe out all contagious diseases which leads up to serum therapy and preventive medicine.

So on we go, ever endeavoring to aid the mass of people of our commonwealth.

What is the spirit that animates the true medical man to endure hardships and expose himself to contagious diseases to help save and lift up his fellow-men? Is it for greed or wealth? No, there is hardly a doctor anywhere in the profession who could not instantly double his income in practice if he would adopt a code of morals that is daily in practice and accepted by the business world. Is it fame? No. Even the greatest among us will be overtaken by his epitaph long before his name will be heralded among the people. Is it for pride of power? No. For our powers are exercised for public good. And so medicine goes on healing and preventing disease unmindful of money, forgetting fame and innocent of power.

Our call to the service of the healing art is not the call of wealth, fame, power, popular favor, personal aggrandizement, social ease, comfort, or long life full of restfulness and pleasure. It is a call to war where we must fight valiantly for liberty, life and health. We are enlisted in a lifelong battle on the side of humanity in its grim struggle with disease and death. Someone has said: "Man enters the world wailing, and leaves it with a moan, and punctuates the journey from the cradle to the grave with many a cry of distress."

If there is anybody in all the wide world who should have high ideals and an honest heart it is the man of medicine. Why should we not make medical history that we can look back to with pride, and because of this history, we, and all succeeding generations can have lofty inspirations for the future.

Man is never born great except potentially,

*Read at the Sixty-Fourth Annual Meeting of the Missouri State Medical Association, St. Joseph, May 24-26, 1921.

nor can true greatness be thrust upon him. Experience has taught us that it can be obtained only by achievement.¹ The day is ours to use or abuse as we like. If we allow our minds to drift and our conclusions to form themselves they will be shallow, uncertain and unsafe. Medical men have important matters to judge and to decide; therefore it behooves us to train every faculty which we have to be ready to meet the demands made upon us.

The general practitioner has wonderful opportunities to develop mind and power if he will but avail himself and be ready to help solve the great problems and overcome the difficulties that are his.

Medical history has added many illustrious names to her pages, but there is no record where they were born great, but by persistent, conscientious devotion to the service and loyal attentiveness to their books they won laurels not only for themselves, but for their great profession. We need more everyday doctors, for from these came a Robert Koch, an Ephraim McDowell, a John Hunter, a Murphy, an Osler, a Binnie, an Ochsner, a Mayo and a multitude of others.

We need to make more thorough examinations so we can arrive at a more correct and satisfactory diagnosis. We cannot afford to take a patient's word for our diagnosis nor should we be satisfied to make a chest examination through a silk waist, a corset or several thicknesses of clothing, or simply to be satisfied by feeling the pulse and looking at the tongue.

No doubt each of us have potential greatness stored within us which needs development; then let us at once realize that we have matriculated for a lifelong course in the university of practical experience where every patient is a study, where every symptom is to be searched out and traced to its origin, and weighed as to its significance, where every examination is an exercise in skill, every operation a training in technique and every prescription a drill in sound therapeutic reasoning. I for one do not believe in shotgun prescriptions; we can only become great by growing into the greatness of our task.

Osler says "the practice of medicine is an art; not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head."

Often the best part of your work will have nothing to do with potions and powders, but with the exercise of influence of the strong upon the weak, the righteous upon the wicked, the wise upon the foolish.

To you, the trusted family counselor, the father will come with his anxieties, the mother with her hidden griefs, the daughter with her trials and the son with his follies. Great

things have been accomplished but greater remain to be done.

We occasionally hear the opinion expressed that the man of medicine will soon lose his occupation because of the great advance in medicine, but we find every discovery in medicine has opened doors of opportunity for the physician for every one it has closed. Erlich presents a new remedy which may cut short the prolonged treatment of syphilis, but in so doing he opens to research the great field of chemotaxis.

Lord Lister developed antiseptic surgery with the result the world is filled with surgeons. Medicine still has a great field for advancement. Tuberculosis has not surrendered. Measles and whooping cough are still serious and abroad in the land. Cancer remains the scandal of medicine. Gonorrhea and wild oats continue to be sown together and to yield their bountiful crops of disaster. Mental and nervous diseases, auto-intoxication, pneumonia, kidney disorders, arteriosclerosis and many other diseases await elucidation.

The science of medicine is eagerly and earnestly using every means at its command to solve the mysteries of the unknown, while it is true we are falling far short of applying the truths already revealed. Wherever the science of medicine has presented a new means of accurate diagnosis, or developed a better treatment or evolved a surer prognosis, or offered a safer prophylaxis, would it not seem reasonable that these discoveries should immediately appear in practice and rapidly become universal in use? Is it not natural to suppose that the science and the art of medicine should walk hand in hand, and theory and practice should keep step in the onward march of medical progress? The man of widest knowledge in medicine today is the everyday doctor in general practice and yet the times demand even of him that he broaden his field of vision. Medicine has grown far too great for any one man to cover the entire field and do it well.

Is it not time we should do some specializing in the rural districts thereby making better counselors in special diseases, and right here I wish to say consultations should be more frequent. They no doubt would be if we were better fitted to act as consultants, and knew how to apply our medical ethics and use our high ideals when called into a case with our fellow practitioner. I believe that every physician in the different organized counties should specialize on different subjects, that we might make better counselors and be more efficient when called in serious cases. Someone has said that the general practitioner will soon have nothing left but a small ring around

the umbilicus. So I wish to emphasize we, too, should specialize.

There certainly is no doctor but desires the greatest good for his patient, consequently there should be a mutual agreement as to the treatment to be followed. The consultant is merely an assistant whose suggestions should have due consideration, but he should not assume to dictate or take advantage of his opportunities to make a display of his talents to the laity. No one should ever prescribe a treatment merely to please someone or save himself from censure. The welfare of the patient is too serious a matter to be trifled with in that way. I don't intend to allow any doctor to rip me up before my own patient but once. The following medical commandments were published in a prominent medical journal some time ago:

1. Thou shalt not say evil of thy colleagues or hurt their business.

2. Thou shalt treat thy patients and not experiment upon them.

3. Thou shalt not call every bellyache a case of appendicitis.

4. Thou shalt be antiseptic in thy conduct and aseptic in thy practice.

I have taken the liberty to add the following:

5. Thou shalt not consult with an osteopath, chiropractic or a disreputable physician.

6. Thou shalt not be unethical unless compelled to be at the end of a shotgun.

7. Thou shalt not hesitate to collect all money due you.

8. Thou shalt not advertise your business or shoot craps.

9. Thou shalt not steal another M. D.'s practice or kill his patients.

10. Thou shalt not invest in too much oil and mining stock, nor write booze prescriptions to please your clients.

Soon after the Civil War was over medicine as a science took new life. Hospitals, surgeons, asepsis and antisepsis came into use; medical schools were founded, schools springing up everywhere. The medical college fever was contagious.

Diplomas were written to sell and they sold. Doctors, why the woods were full of them; good, bad and indifferent came forth each year by the thousands. History reveals the fact that in olden times there were no schools, but doctors were granted diplomas if they had practiced for ten years.

Fifty years ago in Boston a revolt began against the then prevailing laxity of medical education, a reformation which laid the foundation of modern medical education and modern medicine in the United States.

The Martin Luther of that medical reforma-

tion was Charles William Eliot, then the new and youthful president of Harvard University.

The opportunity is ours as never before to lead the world in higher medical education and we must not fail, for the demand is great. We must have reputable and efficient schools. In England they say doctors where we say physicians, because they have no osteopaths, naturopaths, chiropractors and various other paths and faddists to assume the title of doctor. Therefore, it is no honor in our country to be called doctor—while in England the term doctor confers a high honor to the one addressed or spoken of because it always means doctor of medicine.

I am fearful that our noble calling is becoming too much commercialized, which gives more room for quacks and fakers.

A sneak thief in practice is very forcibly brought out by a writer in the following: Speaking of ethics among the ethical the in-good-standing, gum shoe, indirect pirate is the most damnable and hard to punish; he steals your patients by looking shocked when told of some part of your treatment, by remaining silent when he should defend you; by making useless examinations solely to enlarge on your work, by saying: "And as your doctor has told you I find"—something he knows you haven't found, neither has he; by delegating his wife or his old maid sister to capture one of your best families by the art of indirect suggestion; who smells of your medicine and still speechless changes the Px, who fails to telephone you when in your absence he has seen your client, etc., *ad nauseum*.

All the time he has said nothing, you can prove nothing, you can do nothing. This predatory party is not unethical, the term is too dignified. He is not a real thief, he is just a puny, petty larceny sneak. Were he a dog the name cur would be a compliment and yet he is everywhere. But someone has said, what about the quacks? Someone has classed them as that insatiate vampire that lives by the blood of its victims, that unmitigated villain who robs the foolish and suffering of money and of life itself. Is it right that we should be charged with his deeds? Better charge Christianity with the hypocrite. For has not the great medical profession cast out the quack and all his imitators? Have we not already ostracized him? He is none of ours and yet has not the protecting arm of law been thrown about him and is he not received into the bosom of the church? And does he not sit in the congregation of the saints? And worst of all even our weekly, daily and religious papers defoul themselves with his lying, disgusting and misleading advertisements, and again have not the courts given him the advantage of every known technicality and

quibble that he might not have impaired his most sacred liberty of fleecing the people. No, no—he is none of ours. We hope and well we may pray that the time will speedily come when we will be rightfully recognized in this great country of ours so we will have opportunity to put a stop to this damnable practice.

Our profession, that of medicine and surgery, the greatest profession in all the world, should be fully recognized by all classes of people as being large enough, broad enough, scientific enough to meet their every need, and that our services are essential to their welfare and happiness. The people should have sense enough to know that they cannot get along without the man of medicine.

Why is it we are compelled to have in existence during any medical era not as our competitors, but as fads to tickle the fancy of our clientele.

Healing cults, Weltmerism, Christian Science, water cure, new thought, osteopaths, neuropaths, Namby Pamby and what not, and the last and perhaps the most ridiculous of them all the abominable Chiropractor to adjudge and sublux the spine.

Even the osteopaths who are gaining some recognition are earnestly and definitely striving to add medicine and surgery to their practice.

Pardon the personal reference, but recently a client pronounced the man of medicine narrow, shallow and selfish for not consulting with osteopaths, and informed me of osteopath parents in Ohio who are educating a son in medicine and after his graduation they would prove to the world that osteopathy and medicine should and will go hand in hand.

Is it because the great medical profession is so small, so narrow, so unscientific as to compel the people of our land to seek something that our profession cannot give them that these new and unfounded fads come into existence? Is it because we are not faithful to those who come under our charge? Is it because the man of medicine is not properly educated by some reputable school or because we are unethical? No, no, surely it is none of these.

We believe it is because we are not sufficiently organized, lack of co-operation and lack of proper representation and hearing in the legislative halls and perhaps more largely because the people, yes the people of our commonwealth are in part ignorant, careless or indifferent to their real needs in time of sickness and distress.

It seems to me it is time we should educate the people that medicine and surgery is large enough and progressive enough to meet

all the requirements of all ages in which we live.

Men, it is appalling that we must even at this time face the fact that the people have a strong tendency to leave the family physician, the surgeon or specialist and not only lean towards a thing that represents the nature of graft, but what happens—they seem to completely fall in, losing themselves and sight of medical science and scientific research that has so long been established for their safety and benefit.

We all understand the difference in power given by one revolving pulley, and the immense power generated by the combined action of a series of pulleys; the difference between the combination of all the reputable physicians of a community with the hospital as a center and the old beaten pathway of one man acting as a weak unit, constitutes the much to be desired group medicine.

We must be willing to forego financial gain in order to raise the ethical standard of a profession which we so much honor.

We are led to believe that preventive medicine when thoroughly instilled into the coming generations will be a great means of bringing the physician and the people closer together. We will then have more freedom with our clientele and be compelled to recognize better ethics and higher ideals.

When Dr. Wetzel had finished reading his paper, President Ferguson announced that Dr. Wetzel's son, Nevin, "a future member of the Association," would present his first contribution to the annual proceedings. Upon the president's invitation, Nevin recited the following poem by Judd Lewis:

My doctor knows what's best for me;
He says it wouldn't hurt
Me, not a little bit, to be
Therst turned loose in the dirt.
He says the things a feller needs
Ain't rugs an' polished floors,
But thest sunshine, an' flow'rs, an' weeds,
An' to run wild out doors.

He says that this is barefoot time
An' ain't no time for shoes
On a boy's feet; shoes is a crime!
He says mud orter ooze
Between a little fellow's toes
Along this time o' year.
When southern breezes comes and blows
An' summer time is here.

He says the things that makes me thin
Is keepin' clean and neat,
An' neckties and a-stayin' in
The house off of the street.
He says if I was thest turned loose
All raggedy and wild,
That I would find life of some use,
An' be a normal child.

He says that all his medicine
 Won't help a feller none,
 If he's always to be kept in
 Out of the wind and sun.
 He says his medicine for me
 Is sun and wind and sky
 An' feet unharnessed an' set free,
 An' kites an' things that fly.

If when I am growed up an' tall
 An' I have a boy, I bet
 I know the doctor of 'em all
 That I am gonna get.
 An' I will do thest like he says
 I ought to for my child.
 An' he'll be healthy all his days,
 Thest from a-runnin' wild.

DISCUSSION

DR. C. LESTER HALL, KANSAS CITY: To those who have grown gray in the practice of medicine, it is very refreshing to have presented to us this wonderful paper by so young a man. It really leaves no room for discussion. He is so thorough and far-reaching and beautiful in his poetic expressions, which come with the vigor of youth and hope of life; yet we who have been crossing the waters so long in the profession should say something in commendation of this paper.

Medical ethics—ethics between man and man—is nothing but the practice of the Golden Rule: "Do unto others as ye would that they should do unto you."

The paper led out in such a broad, historic citation I was afraid the Doctor was going to neglect the real object of his paper.

Without medical ethics we are not a profession. We are wandering away from the pathway so beautifully marked out for us by our forefathers. Medical ethics is ruthlessly treated and cast aside by many of the men of the present day, even in active practice. A violation of medical ethics does not mean an honest controversy between consultants, but a shrug of the shoulder or an undue quietness on the part of the consultant, thus leaving an unvoiced suggestion that all things are not right.

We owe it to the profession to read and disseminate the principles of medical ethics as given out by the American Medical Association as the Magna Charta of our profession. We should read it and, above all, we should practice it. If you are not a gentleman or an honest man, don't waste time to do it. But if you want to be counted among those who have laid down such rules for our government, you should study and practice the principles of medical ethics.

It is easy enough to be a gentleman. It is much easier to be a man who is lacking in those distinctive characteristics that mark him as a man of honesty and uprightness.

A consultant often muddles the case by downright dishonesty. Often he has no conception of an improvement in the treatment, but in order to emphasize his importance he makes a ridiculous change in the treatment to the detriment of the man who called him.

I want to commend the paper from a younger man who is following loyally the truth, couched in beautiful language.

I move the secretary of this Association obtain copies of the Principles of Ethics and mail to every member of this Association, and let the men think enough of it to reread it as they say their prayers, almost daily, in their practice.

Dr. F. M. Johnson said: "Be a gentleman, and you are ethical."

Dr. C. Lester Hall's motion was seconded and carried.

THE PITHIATIC MASK*

FRANK R. FRY, A.M., M.D.

ST. LOUIS, MO.

I hasten to explain a somewhat fanciful title. "The Hysterical Mask" would be the nearest and perhaps a better rendering of it in other terms. I have used the newer adjective in my caption by way of again reminding us all that it would be fortunate to have some term or brief expression to correctly and conveniently carry our meaning when speaking of certain hysterical phenomena. To this end, Babinski a number of years ago coined and used the word "pithiatism," explaining that under it he included only phenomena that could be produced by suggestion and also cured by suggestion. His term has never gained popularity. In the first place, the term hysteria is not only a very ancient one, but it has been used by the profession in a fairly definite sense for many years to express ideas apart from the popular or lay use of it. Hence it has not been readily displaced. Secondly, many prominent authorities could not assent to Babinski's interpretations of suggestible phenomena, and therefore found no advantage, but possible confusion, in the use of his term. However, his extensive clinical and literary work on the rôle of suggestion in creating certain signs and symptoms has greatly clarified some of these problems, and we here owe much to his genius. The contention which still continues to some extent over Babinski's definitions is now more one of mere terms than of opinions. For after all, certain objective phenomena are what we have in mind as distinct from the emotional and other psychic accompaniments of these phenomena when we are attempting to classify under this particular heading.

If it is proposed to enumerate these objective phenomena of pithiatic or hysterical origin we are reminded that in any reasonable space one cannot make more than a tentative or schematic list of them. For example, if we begin with the motor, sensory, co-ordinative and vasomotor symptoms as leading heads we must dwell at length on all of them to convey an adequate conception of the possible items under each of them which must be kept in mind in the practical clinical investigation of cases. In fact, it is only by gradually following the exhaustive work of clinical masters that we may gain all the reliable guidance necessary for the task.

The enormous amount of this kind of clinical

*Read at The Frisco System Medical Association, Springfield, Mo., May 24, 1921.

cal material furnished by the world war has extended the more intimate knowledge of it to large groups of observers everywhere, and the literary work of many of those comprising these groups has brought the subject to us in such excellent shape that all who desire may study it to better advantage than ever before.

It need hardly be repeated here that, in civil life at least, those who are connected with the medical service of common carriers have greater need of this kind of knowledge than any group of practitioners. That this knowledge has been rapidly extending amongst these particular groups in recent years is quite evident. Therefore in addressing an audience of railroad surgeons, I have perhaps dwelt too long on the difficulty and the importance of preparing ourselves to recognize and deal with hysterical situations. What I have said, however, is preparatory to some observations on one phase of the subject, namely, the necessity of searching through or beneath a mask of hysterical symptoms for other phenomena which may be and in fact often are present.

By way of illustration I may briefly sketch a few recent instances:

Case 1.—A married woman 30 years old had three days previously been seized with a typical major hysterical attack. With suitable sedatives and other care she had become quieted after a few hours. She then complained of severe pain in the head and it was noticed that there was a partial paralysis of the left upper and lower extremities; the face was in question. Within these three days she had a number of succeeding spells like the initial one but less severe. After each of these she cleared up mentally, but was distracted and emotional over the severe pain in the head. On the third day, at the time of our observation, she was fairly lucid, responding intelligently to questions, and to our requests in conducting an examination. Without going into unnecessary detail, it was found that there was a demonstrable paralysis of the left face, although slight. All the tendon jerks of this same side of her body were plus; she had a definite Babinski on this side, and the abdominal reflex was absent on this side. On the showing of the reflexes alone there was no question that she had an organic brain lesion. In addition, however, she had a temperature of about 100 degrees and a slight but definite heart murmur was located. She died three or four days later, rather suddenly, in coma, with high temperature, probably from a septic embolism of the brain. There were other items in the case which led the attending physician to believe at first that the condition was only functional. A few days prior to her first attack she had fallen on the stairs and jarred and bruised herself considerably, and just subsequent to that had been greatly disturbed over some unpleasant happenings in the family.

Case 2.—A lady, 44 years, was knocked or rather pushed over on the sidewalk by a lamp post which was partly broken off in a very spectacular automobile accident, accompanied by much commotion on the part of many people who were in the immediate vicinity at the time. Her husband and others, including the physicians, thought she was more frightened than hurt. She complained of much distress, at times amounting to sharp pains about the left shoulder.

There were no external evidences of injury, at least nothing more than slight bruising. On the tip of the opposite shoulder there was a more marked bruise. She is fat and fair and easily bruised. During the succeeding weeks she still complained of the shoulder and arm and became more nervous, and increasingly seemed to be losing the use of the member. We examined her about ten weeks after the accident and found a typical though not profound hysterical anesthesia of the whole extremity extending well up onto the cap of the shoulder. She was emotional and hysterical in her behavior. Under the circumstances she tolerated the manipulations of the shoulder joint surprisingly well. An X-ray showed quite a sliver broken from the tip of the acromion. The case presented a number of interesting items, but I am introducing it here to illustrate a single point to be later discussed.

Case 3.—A young woman of about 27 years, living in the country was thrown from a buggy in a runaway. The general shock of the accident was considerable and she had a great deal of pains in her lower back and across the hips, and this was greater on the left side. She was assured there were no broken bones and that her suffering was due to nervous conditions alone. In spite of efforts to get her up she remained in bed and became progressively more powerless and helpless in her legs and back, and in the left leg she seemed to have lost practically all voluntary movement. On examination three years after the injury, it was found that there was an almost complete hysterical paralysis of all segments of this left lower extremity, and an extensive hysterical anesthesia accompanying it, and also a very interesting local vasomotor condition of the leg and foot. The general neurotic and somatic condition was very bad. For our present purpose it is not necessary to recount all these symptoms and conditions. Carefully made X-ray pictures showed extensive arthritic lesions in the lower lumbar and left sacro-iliac articulations. Under skillful orthopedic management, consisting largely in properly applied casts, and in persuasive methods of the right kind, inducing her to persist in efforts to use her legs, and finally to walk on crutches, steady improvement has resulted. When she was first induced to try the crutches the left leg was merely dragged along, trailing behind her on the back of the toes in typical hysterical fashion. She now steps along with it in about normal manner, and for a short distance without any kind of support. Even with this brief description the difficulties of the case are evident. It is also evident that an earlier recognition of the situation would have made a great difference in the course of it.

Babinski, especially, has dwelt at length on the refinements necessary in differentiating between organic and functional paralysis. It was in the course of these investigations that he demonstrated the great value of a close study of the reflexes. The "toe-sign" to which his name has become so fixedly attached is simply the most familiar phenomenon amongst many set forth by him.

In the case (1) just cited the condition of the reflexes enabled us to positively diagnose a definite cerebral lesion in the midst of evident hysterical attacks, and to recognize a serious brain condition some days before a fatal issue which was sudden and rather unexpected.

Case 2 well illustrates the value of mak-

ing an X-ray examination a routine in all instances where there is even remote possibility of injury to bony structures. I am sure that now all of us can cite cases to confirm our increasing friendliness towards the X-ray's almost oracular help in diagnosis.

Case 3 not only illustrates forcibly the same fact as Case 2 but like it also the fact that a neglected condition of this kind may become the source of a sustained psychic trauma in addition to its continued insult to the tissues of all kinds in its immediate vicinity. Hysterical and other psychic symptoms which may not appear early often come on later as a result of traumatization thus sustained. Charcot in speaking of the interval between trauma and the advent of hysterical phenomena used the phrase "the period of meditation" and emphasized the necessity of noticing it and of studying the patient with reference to it. If we find this period has been prolonged, we should all the more carefully, if possible, look for complications of a physical kind. In studying every localized hysterical phenomenon we should employ all the knowledge and ingenuity we can muster for the occasion endeavoring to discover the localizing cause. Of course this goes without saying, yet I am sure, although it is a very engaging game, we are often not careful enough in playing it.

We usually think of hysteria as being a producer of most unruly performances, nevertheless it exhibits certain habits which have been noticed and should be kept in mind. For example, in the matter of hysterical paralysis we note: That hemiplegia is the most frequent type and that a left hemiplegia is more frequent than a right one. A paraplegia is less frequent than a hemiplegia. A facial paralysis is very rare. A monoplegia of the leg is more rare than that of the arm. A monoplegia of the left arm is more rare than that of the right. While many cases are of the flaccid type, others are of the rigid type and accompanied often with contractures that are notoriously difficult to deal with. We readily see the use to which we may put this kind of general information. The more against the rule a case is, the more important may be its localizing cause and hence the greater incentive to discover it.

It will be noticed that my citations have been practically confined to the paralytic phenomena of hysteria. My reason is that thereby I felt I could more directly and forcibly impress my special theme, namely, the art, for such it is, of analyzing hysterical syndromes, not merely with reference to their psychogenic bearings, but to discover, as well, all physical factors that may possibly exist in every instance. In the same light it is just as necessary to canvass the other motor signs, for ex-

ample, tremors and spasms; the sensory signs, general and special; the vasomotor signs, and so on down the list of all the numerous items within the reach of our knowledge.

Humboldt Bldg.

SOME FACTORS IN TUBERCULOSIS

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Tuberculosis of the lungs has been described in writings for the last 2500 years. Evidence of it has been found in mummies of Egypt. Before the Christian era it was thought curable, and long ago milk diet and mountain air were considered curative.

There is little reason to believe that it has changed materially in its pathological or clinical manifestations.

In its extent it is pandemic. No great area of the earth has escaped.

Vast statistics are available, but in view of what is at present still problematical much will need critical reviewing and rewriting.

There is, however, an ever-increasing tendency to verify the newer conceptions of this problem, especially regarding the reaction of humans toward tuberculous invasion.

This presents a subject of great interest, which is being checked by statistical epidemiological study, as well as by exact pathological work.

The sensitiveness toward infection of non-tubercularized races, even of splendid physique and living under good hygienic surroundings, is very instructive when compared with the resistance and apparently increasing immunity of people long exposed to infection, and with constant betterment of their hygienic surroundings.

Not alone is there a lessening morbidity and mortality, but there is good evidence to believe that in the latter people it is a more chronic type of low virulence. This seems to indicate the necessity of vaccination by tubercularization of all people. Extermination of the tubercle bacillus is beyond present-day conception.

Avoidance of massive primary infection with maintenance of a proper hygienic plan of living is a generally accepted theory upon which modern defensive measures are based.

Our present conception of practically universal infection in early life, with a living, continuous, protective vaccination which endures until other factors develop, is more than a potentially constructive theory, which should, in time, lead to practically preventive measures of great value.

Races unprotected by this primary tubercularization are very prone to a generalized and rapidly fatal type of infection. The use and abuse of alcohol, together with syphilis, are proven factors in augmenting its dissemination.

As stated, in peoples long in contact with civilization (i. e., long tubercularized) the type of infection changes. There seems to be a protective influence thrown about tissue, away from the primary lesion.

Tubercle bacilli constantly bathe the mucosa of the gastrointestinal tract in open cases without infecting but a small proportion of cases.

Tubercle bacilli have been found in the blood stream with no clinical evidence of disseminated lesions. Healed secondary lesions have been found in the kidneys, spleen, even the pia mater, when the primary healed focus was in the lung. Living tubercle bacilli have been found in tonsillar, adenoid and post-cervical lymphatic tissue in some instances in the first year of life.

Healed, widespread primary lung foci have been found at autopsy in young people (12 years) dying as a result of other illness.

These facts indicate the ability of the human organism to overcome an invasion with tubercle bacilli, if that invasion is not massive. This immunity is variable and subject to many other conditions, either inherent in the host prior to infection or produced by the action of the tubercle bacillus subsequent to invasion.

After infection and immunity (relative or absolute) has been established, changes in such a balance occur and a condition regarded as active clinical tuberculosis may be established.

It is conceivable that, the original vaccination becomes inactivated, no longer immunizing the host to superinfection. This, either by death or marked attenuation of the original strain of invading organisms, possibly a lack of specificity of such vaccination, or to a walling off by fibrosis, allowing an inadequate absorption of necessary antigens.

In practice it is impressive to note in some cases of disseminated tuberculosis (kidney, bone, lung) the chronic and apparently benign nature of the infection, one focus apparently immunizing the other, one showing evidence of betterment during apparently an exacerbation of the other.

From facts shown by pathological, clinical and X-ray study it appears that many cases of healed tuberculosis could at some time have been recognized by adequate methods of diagnosis. Surely cases of any extent must have caused appreciable clinical symptoms at some period.

Pale, asthenic children are more and more being proven to be those too vulnerable to

primary infection. Closer study is necessary, particularly von Pirquet reaction (when negative), chest plates and physical examination made each year or oftener as a routine. One finds in young children a surprisingly great percentage of lung hilus shadows and other evidence of mediastinal lymph gland enlargement, i. e., positive D'espine, presumably due to tuberculosis.

Incidentally, there is some reason to believe that many so-called puerile or accidental cardiac murmurs are due to pressure of enlarged hilus glands on the pulmonary arteries. The location and protein character of the murmur, its occurrence, ordinarily in pale, delicate children at a time when primary infection occurs, all of which is unexplained on the basis of any other diagnosis, together with the fact that experimentally on dogs very little pressure on the pulmonary arteries produces a murmur of very similar character make this very plausible.

Statistically there is a generally accepted mortality from pulmonary tuberculosis, in tubercularized people, of from one to five per thousand of inhabitants. Also a ratio of one death due to pulmonary tuberculosis to seven from all other causes. Autopsy findings vary but show tuberculous infection in from sixty to ninety-eight per cent. of all autopsies. X-ray and tuberculin studies directed to such investigations tend to verify this. It is hard to reconcile these facts with the result of average clinical work. Certainly there is a tendency to minimize the morbidity of tuberculosis or at least to leave unclassified as such all cases without any but the most evident clinical symptoms.

Unfortunately from a clinical standpoint our methods lack the precision which characterizes pathological work. This obviously demands a consideration of all available examinations to establish a fundamentally accurate conclusion.

Physical findings, clinical records, roentgenology, serum diagnosis individually are inadequate, and collectively adequate in experienced hands only. However, it is very encouraging to see an increasing uniformity in classifying the extent of lesions, when adequate methods of diagnosis are used.

It is unpardonably academic to say that there are vast numbers of cases of active tuberculosis without tubercle bacilli in the sputum, but the frequency with which this is accepted as the final and all too often only test of pulmonary tuberculosis makes justifiable sharp criticism of such methods. To wait for tubercle bacilli to show in the sputum is to invite disaster when there are other factors that indicate active disease.

Likewise interpretation of chest plates or

fluoroscopic examination without equivalent consideration of other means of diagnosis does not merit the attention of those, serious in tuberculosis work, which also is true of the complement fixation test in its present stage of refinement.

The absence of fever is no criterion as to the existence of active open advanced disease to say nothing of minimal cases.

It is needless to more than mention that cases may be fat and plethoric yet be far advanced.

All tuberculin diagnostic tests at times fail to give a reaction in open active tuberculosis. Present activity in investigation of allergic conditions with various sensitizing agents and the reactions of various hosts to their specific antigens bids fair to explain focal and general reactions in a broader way than heretofore. There is reason to believe that tuberculous lesions are acutely sensitive to many agents especially proteins and are known to react locally and systemically to other agents (proteins especially) in much the same way as to tuberculin. Also that various factors formerly supposed to "lower resistance" to infection in reality produce factors that cause a cellular sensitization, i. e., focal reactions. For instance, reactions often seen from sunbaths, injuries, fatigue, various toxic and infectious agents, menstruation and many others offer hope of elucidation on this basis.

It is conceivable also that such focal reactions may follow sensitization not alone from internal products, even endocrine secretions, but also extraneous elements, such as food, and even ordinarily saprophytic bacteria, as the bacillus coli communis, etc. There is much to be learned but a large field of investigation is opened.

As to physical findings not much can be said in a paper of this kind. It should be remembered that in a given case they may vary from time to time, much of which is due to the degree of active or passive hyperemia and lymph stasis in the areas involved, also the degree of alveolar inflation. In this connection we have noted fine rales appear in a lesion in some cases on coming from a lower to a higher altitude which later disappear.

Rales are not infrequently heard in lesions showing no plate or fluoroscopic shadows, while the opposite is likewise true when few physical signs are found except those of emphysema when marked hilus and peribronchial fibrosis is shown by X-ray in types of advanced fibroid phthisis. Rapidly extending tuberculosis of the lung very frequently does not show X-ray shadows, while at the same time physical findings are marked. This is in keeping with the fact that the tissue is not organized into cicatricial tissue dense enough to

show shadows. This makes it necessary to consider the history carefully as to the length of illness in order to reconcile extensive physical findings with plate findings which are slight.

It is not possible here to more than outline in review certain elementary questions of treatment, pardonable only because many views on this subject need reconciling.

The value of rest, relative rest, and exercise has been subject to endless discussion. Their use needs specific application to each case. Type, degree of involvement, even temperature and pulse are not infallible guides. The value of rest remains unquestioned but graded exercise under supervision is of great value in many cases.

The destruction by too prolonged inactivity of a patient's morale, replacement of morale worth by an attitude of vagabondage is a question of real import. We have not attained anything of economic value by enhancing physical well-being at the cost of character deterioration. Under treatment requisite to a cure, patients are usually withdrawn from an environment, stimulating by its association with constructive tendencies, to one very much of their own making.

Altogether in the background of phthisiotherapy is co-ordination of the physician's personality with the temperamental needs of his patient.

While it is necessary to demand of a patient a degree of temperamental stability and mental poise probably beyond any call of his previous life, it is well for the physician to remember that his charge is sensitized to mental depression and anxiety, needing, keenly, a sympathetic understanding and tuition in order to learn an acquiescence with the newly destined order of things.

It is not alone a question of inherent temperament. There exists a psychasthenic state due to toxemia, prolonged anxiety and nervous fatigue which makes quite inconsistent a normal outlook on life. It has been suggested that such a state of irritable weakness of the nervous system so evident in the tuberculous is due to a sensitization to protein derivatives or better to the product of fatigue, anxiety and tuberculous infection.

It has been said that the tuberculous are inclined to be hopeful, also that they develop traits essentially selfish. To dismiss their mental attitude as such is to fall short of understanding their viewpoint.

Our case records extending over many years show a universal improvement in hemoglobin percentage under daily intramuscular injections of iron, strychnin and arsenic, the only routine medication adopted by us. This is not altogether due to general improvement and

lessened toxemia, as there is a tendency toward lowered hemoglobin percentage when the hypodermics are stopped, even in arrested cases. It can be reasonably assumed that such a better blood condition is of benefit in combating this disease.

Without presuming to more than touch upon the question of tuberculin therapy, it may be suggested that it is apparently of definite value in cases of persistent asthma, with evidence of marked hilus, glandular involvement, possibly associated with damming back of the peribronchial lymph flow, without other extensive involvement. Asthma due to cardiovascular, renal disease or an allergic state is not meant. In reviewing our records it is apparent that among those living now, after a varying number of years, a high percentage were treated with tuberculin. It is very near the truth to say that any case that will do well will do better with tuberculin properly given. Also that an arrest made under tuberculin is more sure than one made without.

Symptoms of toxicity seem directly in proportion to the degree of thickness, vascularity or permeability of the cicatricial wall surrounding the lesion, a fact which if ascertainable is of value in prognosis. There is some reason also to believe that cases not shielded by such a wall do not accept tuberculin therapy well, while inversely it is logical to believe that cases that tolerate rapid increase and full courses are ordinarily favorable, owing to successful walling off of their foci.

Absorption of the product of partial digestion or disintegration of cells in tuberculous foci is very likely, the frequent factor of causing systemic reaction, more than the direct products of the tubercle bacillus.

Artificial pneumothorax is a well-established procedure. As with tuberculin it has survived the vicissitudes of hyperenthusiasm, with its usual complementary skepticism. Careful study and keen judgment in case selection is the factor of greatest importance in applying it. Indication for its use is difficult to outline. Progressive cases unilateral in the clinical sense without pleural adhesions or lung cavity are those best adapted to this procedure, while the success of this operation decreases in direct proportion to the degree of opposite involvement, pleural adhesions, cavity formation, etc. Slight involvement of the opposite lung is not an absolute contraindication. Such an involvement often becomes quiescent after compression of the opposite lung, which is presumably due to decreased toxemia and increase of the defensive forces. That there is a definite beneficial psychic effect, especially in those cases of spectacular immediate improvement cannot be contradicted, but it is not possible to accept its value on any such

basis alone. While many compressed lungs go on to a marked fibrosis, becoming a leathery, indurated mass beyond hope of reinflation, such reinflation can take place and the lungs return to usefulness with no evidence of activity.

However, necrosis and caseation can extend even in a well collapsed lung, in which type of case it may become a mere thin walled sac often with weblike adhesions stretching to the parietal pleura. These may be tubular and contain pus. Rupture of such adhesions or sac into the pleural cavity is disastrous. Such cases require especial care and slow deflation under very little pressure. The antithesis to these are cases of cavity with hard, indurated, fibrous walls which, in order to benefit, it is necessary to compress with a definitely positive pressure. In hemorrhage the advisability of compression should always be considered.

Thoracotomy, while a "dernier resort" measure, should be offered to progressive cases that offer indications for lung compression which cannot be accomplished owing to pleural adhesions.

Pleurisy with effusion in tuberculosis should not be looked upon with the opprobrium with which it is. Many advanced cases turn for the better after an acute sharp attack. Cases with pleurisy have been said to be ordinarily favorable types. Clear fluid should not be withdrawn except for diagnostic purposes or where mechanically oppressive. Such fluid serves to immobilize the lung and is thereby a help.

To be surrounded by cases of tuberculosis that have been reborn to a useful life, with safety, is to fully appreciate the greatness of the reward that is offered to those who have dedicated their lives to a conflict which challenges the fortitude of all who do not evade its perils.

CHOLESTEOMATOUS CYSTIC TUMOR OF THE PITUITARY GLAND.—In a case reported by Bruce C. Lockwood (*Journal A. M. A.*, April 30, 1921), in which there were local and internal secretory signs of pituitary disease, at necropsy a rare form of cystic tumor was found involving the gland itself. An adult with a negative past history began ten years ago to be constipated. This was followed during the next five years by some headache, bitemporal hemianopsia and optic atrophy, with loss of hair and change of skin texture, loss of sexual power and atrophy of the genitals, some redistribution of fat, and a subnormal temperature, slow pulse and low blood pressure. The positive laboratory findings revealed an increased sugar tolerance, a negative epinephrin test, a gastric hypo-acidity and roentgen-ray findings of an enormously enlarged sella turcica. Roentgen-ray treatment with the administration of whole pituitary by mouth at first seemed to be followed by some improvement, but shortly the patient went into delirium and died.

THE JOURNAL

OF THE

Missouri State Medical Association

DECEMBER, 1921.

EDITORIALS

STATE GENERAL HOSPITAL AND FOUR YEAR MEDICAL COURSE AT STATE UNIVERSITY

The curators of the University of Missouri have announced the plans for the re-establishment of clinical teaching in the school of medicine at Columbia. It will be recalled that the legislature in special session last summer appropriated money to erect a hospital building. The appropriation was contingent upon the establishment of a four year course in the medical school. The general plan for the reorganized school is to first further strengthen the work of the first two years and to assemble the new clinical staff as rapidly as conditions permit.

Building of the new university hospital will begin in the early spring of 1922. With the funds at hand for hospital building only the first division of the general hospital can be erected. The general hospital will have approximately 300 bed capacity when completed. In addition to this the children's hospital will have 100 beds and the psychopathic ward 50 beds.

It is anticipated that the hospital will in the main serve such individuals in the central zone of the state as will be sent to it by means of the operation of laws yet to be enacted. The laws will be patterned closely after the ones in such successful operation in Michigan and Iowa. Such laws will make it very easy for indigent adults and children to have the best of hospital care at public expense. Doctors, public health nurses, ministers, priests and others who come in contact with the needy sick, will be expected to give information to the proper county, city and other authorized public officers who will appoint a physician to examine the patient in question with a view to determining whether the patient may in reasonable probability profit by residence in the university hospital. The physician then makes his report and is paid a fixed fee for his service in each case. The proper officer then appoints persons to accompany the patient to the hospital and provides further, especially in the cases of minor children, for the safe conduct of the patient from the hospital to his home.

The detail of this system has come out of

the experience of years in the university hospitals of Iowa and Michigan and therefore stands as an approved method of giving hospital care to deserving citizens of the state who might otherwise be lost to the state so far as productive citizenship is concerned.

The service is paid for by the civic unit or territorial subdivision from which the patient comes. The cost is fixed annually by the board of curators and will vary in amount as does the cost to produce the service.

This seems to be an admirable way to satisfy the needs of the middle zone of the state for hospital service of the highest type and also supply the necessary material for teaching clinical medicine at the University. Moreover, it seems that the plan reduces to the minimum the abuses that are apt to prevail in the operation of the free clinics of the older type which in some places do unquestionably bear heavily and unjustly upon the medical profession.

THE NEW CONSTITUTION

Governor Hyde has set January 31, 1922, as the date on which voters shall elect delegates to the convention for writing a new constitution for Missouri, and nominations for delegates must be in the hands of the Secretary of State by January 1, 1922.

The New Constitution Association is working industriously to induce representative citizens to stand for election to the convention and received nominations for delegates at large at a recent meeting. The President of our Association, Dr. Hamel, nominated Dr. Malcolm A. Bliss of St. Louis to be one of the delegates at large. We believe this nomination will meet the approval of every member of our Association, for Dr. Bliss is thoroughly familiar with the purposes of our Association and particularly well informed in writing laws affecting public health.

The Clay County Medical Society has nominated Dr. Spence Redman of Platte City for delegate. Dr. Redman also has the confidence of the profession, possesses sound judgment and would bring to the convention wise counsel on health topics.

It is not likely that the constitution of the state will contain any clause specifically dealing with the practice of medicine, for the reason that the constitution deals mainly with principles and not with specific conduct. Our main object in watching the construction of the constitution will be to see that no clauses are included which will militate against the interests of practicing physicians. We also must concern ourselves with the construction of clauses to see that they are sufficiently comprehensive to prevent partisan politicians from

gaining control of public health activities; on the other hand, we must guard against the inclusion of constitutional restrictions that might prevent the legislature from passing appropriate statutes for the protection of the public health.

We should, of course, endeavor to elect one or two physicians as members of the constitutional convention and in addition to that, every county society should take interest in advocating the election of a representative from the county who will give unselfish and unbiased thought to every proposed provision in the constitution. The convention should be made up of broad-minded, far-sighted, unselfish people, and in their choice the members of the county societies should be capable of directing many voters toward the election of such men and women.

Delegates from senatorial districts will be nominated by the two principal political parties, Democratic and Republican, one from each party. The county societies can suggest names of citizens and send these names to the county chairman of the party to which the persons suggested belong. The county chairman will then transmit the names to the district committee. The choice of the name to go on the ballot will be made by the district committee either at a primary or a convention, whichever method is chosen by the committee.

Delegates at large will be nominated by petitions circulated among voters, these petitions requiring the names of at least five per cent. of the total vote cast for governor at the last general election in the senatorial district in which the candidate resides.

There will be fifteen delegates at large elected and the names of the candidates will be placed on a ballot separate from the ballots for the district delegates and without a party name or designation. The fifteen candidates for delegate at large who receive the highest number of votes shall be elected.

ELIMINATING POLLUTED WATER SUPPLIES

The state board of health at its meeting on October 26, authorized the creation of a division of sanitary engineering and the employment of a state sanitary engineer. This action was taken because of the numerous requests to the board for engineering advice in regard to municipal and other water supplies in the state and sewerage disposal plans. Bacteriological examinations of the water supplies of several towns have shown them to be polluted and dangerous for human consumption.

The law passed in 1919 made it the duty of

the state board of health to investigate all public water supplies in the state. Section 5787 of the Revised Statutes requires that "the state board of health shall make and enforce adequate rules and regulations for the maintenance of a safe quality of water dispensed to the public and for the collection of samples and analysis of water, either natural or treated, furnished by municipalities, corporations, companies or individuals, to the public." The law requires further that every municipality, corporation, etc., supplying or authorizing the supply of water to the public, shall file with the state board of health plans of the water supply system and plans for any contemplated changes. Owing to lack of funds the board has not been able heretofore to employ the services of an engineer and no person has been chosen for appointment, but the board is looking for a suitable man.

In the past many epidemics of typhoid fever have had their origin in polluted water supplies. It will be the aim of the sanitary engineer to make a survey of all water supplies in the state which are likely to be polluted and to give the necessary advice and instructions to correct faulty conditions. The state board of health is required by the federal government to supervise the water supply for all interstate carriers and to certify to the Surgeon General as to the purity of the water used for this purpose. Assistance in this work has been promised by the Surgeon General as soon as a state engineer is employed.

STATUS OF THE REFERENDUM

The referendum on the medical college bill is still effective in suspending the law passed at the last regular session of the legislature. The referee has not concluded his investigation and probably will not be able to do so until toward the close of the year, therefore the circuit court at Jefferson City cannot hear the evidence until some time during the first part of 1922.

No further evidence of unauthorized names being attached to the petitions has been produced since our last comment on the status of the suit. It will be recalled that the advocates of the low-grade medical college found evidence of some names being signed to more than one petition and other discrepancies which will probably reduce the necessary number of signatures on the petitions in the fourth district to a very small margin over the legal requirements. We believe the opponents of higher medical education will fail to prove their contention that the petitions of the fourth district are invalid. The small number in excess of the total necessary for ac-

ceptance by the secretary of state was, of course, an invitation for the opponents of the referendum to institute mandamus proceedings and we were not surprised when the attempt was made.

When the trial court renders an opinion on the report of the referee there undoubtedly will be an appeal to the supreme court for a final decision and that procedure will cause further delay so that we do not anticipate the end of the fight until late in 1922.

The final decision of the supreme court must be rendered in time for the secretary of state to print the ballots for the November election in 1922. In the meantime the State Board of Health is examining only those applicants for license to practice who fulfill the requirements of the statute as at present written. The board does not accept for examination the graduates of schools on the unapproved list.

SMALLPOX

Recently there appeared a statement in the daily papers that certain persons were planning to fight against the rules that require children attending the public schools to be vaccinated, and statements were made attempting to show that vaccination did not prevent smallpox.

Anyone who makes the assertion that vaccination against smallpox does not prevent that disease is blind to the evidence of years of experience and so perverse in his efforts to prove his point that he refuses to see the proof that has been produced in great abundance showing that smallpox rarely attacks people who are successfully vaccinated and never occurs in those who are re-vaccinated.

The courts have held in more than one instance that when the personal liberty of an individual conflicts with the welfare of the community in which he lives, the personal liberty of the individual must be checked. The community is far more important than the individual and no person has a right, even in this liberty loving country, to do things that will endanger the life and health of his neighbors.

Smallpox is now raging in Kansas City and is likely to occur in other parts of the state this winter, therefore it is important that children be vaccinated. It is important that everybody who has not been vaccinated successfully should be vaccinated against the disease. If it were not for the fact that most people are now vaccinated we would have hundreds and thousands of cases and very many deaths, just as they did have in the days before Jenner discovered vaccination as a

means of preventing smallpox. In those days smallpox was more common than measles and much more fatal, and in fact was for many centuries one of the most frightful scourges of the human race. In the eighteenth century every tenth death was due to smallpox and more than five hundred thousand people are known to have died each year. The disease occurs among all races, in all climates, at any age, and irrespective of whether the sanitary surroundings are good or bad.

It is a very foolish person who sets up his opinion of the value of vaccination against smallpox in opposition to the positive proof that years of experience show, and the positive results of scientific investigation, all of which give us today our freedom from this disease. If such a person should take the disease and not endanger others, no great harm would be done, but the disease does not confine itself to a single individual and that person would infect many others, whether he knew that he was doing it or not.

Every parent who has the best welfare of his children at heart will see that the child is vaccinated early in its life. It should be done during the second six months of life when the child is in good health, and between the months of October and June. While complications following vaccination do sometimes occur, it has been found that they occur more frequently in children who run about and principally in the summer months. Of course cleanliness of the vaccinated site is an absolutely essential part of the operation. The physician who does the vaccination should see that this lesson is impressed very firmly upon the family and the child. The preparation of the vaccination virus nowadays is surrounded with so many safeguards as to make it practically impossible to contaminate the virus with any material that would cause serious results, and the proper care and attention of the wound for just a couple of weeks insures a safe and painless recovery from vaccination and immunity of the disease for a number of years.

We do not want our people to be placed in the danger that now threatens some of the cities in England where the percentage of vaccinated people has decreased during the past five years. In Nottingham, England, there have been 46 cases, 36 of them being unvaccinated persons, while Glasgow had a very serious outbreak last year. At Coventry the medical officer of health reports 3,372 births in 1920, with only 9 per cent. vaccinated and he says the community is becoming largely an unvaccinated one. He realizes that an epidemic once started in that city would take a large toll of lives.

Kansas City is suffering from just such neglect of vaccination. The Jackson County Medical Society has worked vigorously to arouse the people to a realization of their plight and the board of health issued orders directing that all school children should be vaccinated during the epidemic and appealed to the people to be vaccinated and re-vaccinated.

We hope the lesson the people of Kansas City are now learning will be deeply impressed upon the city fathers and cause them to enforce the vaccination rule in future. It is the only known method of preventing the spread of smallpox.

CANCER WEEK

The campaign of education organized by the American Society for the Control of Cancer during the week, October 30 to November 5, known as National Cancer Week, proved to be a great success throughout the country. In Missouri the result was particularly gratifying owing to the whole-hearted support given by both the profession and the laity. Through the generosity of the Women's Auxiliary Board of the Barnard Free Skin and Cancer Hospital, St. Louis, funds were available to effect one of the most complete campaigns of publicity concerning public health matters that has ever been carried out in St. Louis. The St. Louis Medical Society aided materially in the success of the week by inviting Dr. J. C. Bloodgood of Baltimore to speak before it on the subject of cancer, for through his visit considerable additional publicity in the newspapers was obtained. A striking feature was the co-operation of four of the large department stores, who turned over one of their large windows for the purpose of an attractive exhibit. Through the mayor's office permission was obtained to exhibit, on eleven of the chief intersecting corners of the city, placards emphasizing the importance of early treatment. The churches—Protestant, Catholic, Jewish, Unitarian and Ethical—co-operated in reading statements concerning cancer on the opening Sunday of the week and distributing literature among their congregations. Literature was also distributed through visiting nurses, social settlements, dispensaries and hospitals, in the pay envelopes of a number of business houses, and to the policyholders of three large Missouri life insurance companies. A special effort was made to reach all graduate nurses throughout the state. Miss M. Taylor, president of the Missouri State Nurses' Association, sending a special pamphlet to all the nurses outside of St. Louis and Kansas City, these two cities being covered by special meetings. Various clubs and

associations allotted special space to the subject of cancer on their programs.

Special mention should be made of the educational campaign in Springfield, which was in charge of Dr. M. C. Stone, member of the State Medical Association Cancer Committee, who arranged a large public meeting for Dr. Bloodgood on November 2. Many other county societies were specially active.

In Kansas City the coincidence of National Cancer Week with the meeting of the American Legion interfered with a complete carrying out of the program that had been planned, but Dr. C. C. Dennie, the local chairman, secured considerable publicity toward the end of the week.

On the whole it may be said that the country has made its first vigorous effort in the control of cancer through prevention and early treatment and that Missouri has done its share. By next year the undertaking should be even better organized and the work carried to every hamlet in the most remote corner of the state.

THE MEDICAL LIBRARY ASSOCIATION

This is a national association including most of the larger medical libraries and many of the smaller ones, as well as a large number of individual members who are recruited from those of the profession or laymen who are interested in medical libraries and medical literature.

The association was founded in 1898 by Dr. George M. Gould, its first president, in connection with Sir William Osler. The object of the Association is the fostering of medical libraries and maintenance of a system of exchange of medical literature among men. Any medical society, association, university or college, having a fixed home, and a library of at least 500 volumes, with a librarian or other attendant in charge, is eligible for membership. The libraries pay \$10 a year dues and may be represented at the annual meeting by two persons. The individual members pay \$5 per year.

The association has resulted in uniting together those interested in a betterment of conditions in medical libraries. The annual meetings have afforded opportunities for interchange of opinions on topics relating to medical library work, the end in view being the placing of the up-to-date tools, that is the medical books and journals, in the hands of the profession. The annual meetings have been held in various places and have afforded librarians an opportunity to inspect the various libraries, both medical and otherwise. There has been the development of a splendid esprit

de corps among the medical librarians. The association maintains an exchange, which is a sort of clearing house through which books and journals are sent from one library to another. This is in no sense done on a business basis, the larger libraries giving freely, and the smaller ones receiving, but even much material is received by the larger libraries.

The headquarters of the association are at 1211 Cathedral Street, Baltimore, Maryland, and all communications should be sent to that address.

NEWS NOTES

DR. JOSEPH C. BLOODGOOD, Professor of Surgery at Johns Hopkins University, was the principal speaker at several cancer meetings in St. Louis, Kansas City, Springfield, and other points, during cancer week.

THERE are three good openings in rural communities in Missouri for physicians who are well trained and experienced and do not object to country practice. Towns range in size from one thousand to four thousand. Any member interested in these localities can obtain full information by addressing the Secretary, 3529 Pine Street.

GOVERNOR HYDE has proclaimed the week of December 4 to 11, as School and Health Week in Missouri, in accordance with the resolution passed at the regular session of the legislature declaring the first week in December of each year to be Health Week. All churches and schools are asked to take part in observing the purpose of the undertaking.

THE annual meeting of the surgeons of the Wabash Railroad was held at the American Annex, St. Louis, Nov. 3. An address was made by Dr. Wm. E. Leighton on "Section of the Anterolateral Tract of the Cord for the Relief of Pain Due to Spinal Cord Lesions." Dr. Francis Reder read an article on "Amputation Neuroma." About three hundred Wabash surgeons attended the meeting.

THE prize of \$100 offered by an anonymous donor to the author of the best paper read before the Jackson County Medical Society, has been awarded to Dr. Lyle M. Sellers, of Kansas City, who read a paper on the subject of "Vertigo: A Symptom for the Consideration of the Otologist, Neurologist and the Internist." The donor of the prize has repeated his offer for another year. Only members of Jackson County Medical Society who have

been in practice for ten years or less are eligible to compete for the prize.

The St. Louis Dermatological Society entertained the members of the Chicago Dermatological Society, November 19, 1921. Clinics were held at the Barnard Free Skin and Cancer Hospital and a number of patients with rare and interesting skin diseases were presented for examination and discussion. Dr. Joseph Grindon is president of the St. Louis Dermatological Society. This is an annual event, the members of one society visiting members of the other society alternately. A dinner was served to the members of Chicago society at the University Club, November 19, forty-five being present.

DR. EDITH V. H. MATZKE has begun her duties as medical advisor to women students at the state university. Her work will be very largely along preventive lines, guiding the university women in their general activities as concerns their health and in the organization of gymnasium groups for the purpose of corrective exercises and physical development. Dr. Matzke has had considerable experience in the care of university women at the Leland Stanford University and at Cornell. She recently had the degree of Doctor of Public Health conferred upon her by the University of Pennsylvania.

CONGRESSMAN DYER of St. Louis has notified the officials of St. Louis that the Government Hospital for the care of men injured or ill from service in the world war will be erected at St. Louis. St. Louis has made strenuous efforts to obtain the hospital and was awarded the distinction after an investigation of various sites offered at Excelsior Springs, Kansas City, Mo., Leavenworth, Kan., and St. Louis. The hospital will be located on ground near Jefferson Barracks, comprising 180 acres and the Chamber of Commerce of St. Louis has undertaken to donate 45 acres in addition if that is needed. With the completion of the new hospital St. Louis probably will gain control of the large building now leased to the government. The cost of the new hospital is estimated at two million dollars.

THE following applicants for license to practice medicine took the examination of the board of health at Kansas City, October 10, 11, 12, 1921, and licenses have been granted to them:

Allen, Walter, Kansas City.
Carter, James J., Kansas City.
Cockfield, Jacob M., Louisiana.

Cooper, John H., Overland Park, Kan.
 Harris, Mayo A., Sedalia.
 Hixson, Ralph W., Kansas City.
 Howell, James A., Grant City.
 Jones, Joseph L., Kansas City.
 Krall, Adolph M., St. Louis.
 McFall, Owen D., Hahira, Ga.
 Polk, Chas. C., Kansas City.
 Scodel, Benson, Kansas City.
 Scott, Isaac F., Kansas City.
 Spizzirri, Alberto, St. Louis.
 Stahl, Fred A., Garden City.
 Stevens, Roy U., Kansas City.
 Suffrin, Clement S., St. Louis.
 Turner, Ledrue W., Oklahoma City, Okla.
 Vickrey, James P., Braggadocio.
 Wells, James S., Kansas City.

The following were granted licenses by reciprocity:

Barnett, John B., from Texas.
 Belot, Monti L., from Kansas.
 Bohannon, John H., from Arkansas.
 Engel, L. P., from Kansas.
 Ginsberg, A. Morris, from Pennsylvania.
 Levey, Simon A., from Nebraska.
 Nelson, Charles S., from Kansas.
 Pinkston, Gresham L., from Texas.

CORRESPONDENCE

PROPOSED AMENDMENT TO THE COPYRIGHT LAW.

St. Louis, November 19, 1921.

To the Editor:

The present copyright law went into effect July 1, 1909. It has been amended three times. March 2, 1913, March 28, 1914, and December 18, 1919. A new amendment is needed. Why? As the law now stands, there is nothing to prevent a publisher from printing on the title page of a book a date different from that of the copyright.

In other words, a publisher may bind sheets which were printed long ago; he may place in the volume a title-page dated 1921, and may present to the public the finished product as "the latest edition."

Few purchasers look for the date of the copyright. Most buyers look at the title page date, thinking it is the true and actual date of the printing. Thus the buyer often is deceived. He thinks he is purchasing a volume or volumes of the 1921 period when, in reality, he is buying something of an older vintage. The undersigned believes that it is high time to amend the copyright law.

At the writer's request the Honorable Selden P. Spencer, junior United States Senator from Missouri, has introduced a bill (S. 2727) to

amend Section 19 of the copyright law, so that hereafter the title page date must tell the truth. The proposed amendment is as follows (the new, or added part is in italics):

Section 19. That the notice of copyright shall be applied, in the case of a book or other publication, upon its title page or the page immediately following. *Provided that wherever a date of publication or of issue appears, the notice of copyright shall also appear*, or if a periodical either upon the title page or upon the first page of text of each separate number or under the title heading, or if a musical work upon its title page or upon the first page of music. *Provided, that one notice of copyright in each volume or in each number of a newspaper or periodical published shall suffice, except as herein provided.*

The bill has been referred to the Committee on Patents, whose personnel is as follows: Hiram W. Johnson, California (Chairman); George W. Norris, Nebraska; Frank B. Brandegee, Connecticut; Richard P. Ernst, Kentucky; Ellison D. Smith, South Carolina; A. Owsley Stanley, Kentucky; Edwin S. Broussard, Louisiana.

These gentlemen can be reached by addressing communications to Senate Office Building, Washington, D. C.

How long a bill will remain in committee ordinarily is an unanswerable question. If, however, the physicians of the country grasp this opportunity to advocate an amendment which is founded on right, an early hearing will be obtained.

The proposed legislation, if written into the law, will harm no honest man. It is of constructive not destructive character. Members of the Missouri State Medical Association now have an opportunity to aid in the correction of a long-standing abuse. One of our own United States Senators has paved the way for us. Will we rise to the occasion?

JAMES MOORES BALL.

LARYNGEAL DIPHTHERIA.—The mortality rate for intubated patients at the Chicago Municipal Contagious Disease Hospital for the year 1920 was 15.6 per cent. for 205 cases. The policy in regard to intubation is never to intubate if it can be avoided with safety to the patient. All laryngeal patients are received in a special room at the hospital, and are again transferred from this room to cubicles as rapidly as possible following the conviction that the likelihood or necessity for intubation is no longer present. By the adoption of this plan, crossed infections have become a great rarity in the intubation room, and the number of patients to be kept under constant observation is held at a minimum. The ratio of tube cases to total diphtheria patients was 11 per cent. in 1919 and 13 per cent. in 1920. Details of procedure are given by Archibald L. Hoyne (*Journal A. M. A.*, May 7, 1921).

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1921

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Nov. 30, 1920.
 Webster County Medical Society, Dec. 18, 1920.
 Livingston County Medical Society, Dec. 27, 1920.
 Montgomery County Medical Society, Jan. 6, 1921.
 Chariton County Medical Society, Jan. 7, 1921.
 Clinton County Medical Society, Jan. 8, 1921.
 Oregon County Medical Society, Jan. 22, 1921.
 Reynolds County Medical Society, Jan. 29, 1921.
 Benton County Medical Society, Feb. 3, 1921.
 Ralls County Medical Society, Feb. 14, 1921.
 Schuyler County Medical Society, Feb. 28, 1921.
 Adair County Medical Society, Mar. 11, 1921.
 Camden County Medical Society, Mar. 17, 1921.
 Pulaski County Medical Society, Mar. 22, 1921.
 Atchison County Medical Society, Mar. 23, 1921.
 Putnam County Medical Society, Aug. 16, 1921.
 Laclede County Medical Society, Sept. 7, 1921.
 Randolph County Medical Society, Sept. 8, 1921.
 Scott County Medical Society, Oct. 15, 1921.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Seventy-ninth Meeting, May 9, 1921

1. A. CASE OF CHOREA AND RHEUMATIC FEVER.—By DR. W. McK. MARRIOTT.

B. SECOND REPORT OF A CASE OF HYPERTROPHIC CHONDRODYSTROPHY. A PROGRESSIVE ANOMALY OF OSTEOGENESIS.—By DR. COPHER.

This case is reported in view of its original interest six years ago when it was reported in the *Journal of Medical Research*, Vol. 46, No. 2, by Drs. Opie and Allison. In that article the literature is reviewed along with original observations on pathology, symptomatology, etc. An abstract of their paper follows:

The case described does not present the characters usually associated with chondrodystrophy or achondroplasia characterized by mal-development of cartilage and bones which are formed within cartilage.

C. L.—White, male, aged 17 years. First entered hospital October, 1915.

F. H.—Negative.

P. H.—He had never been in good health. Until about 15 years of age his joints caused him no disturbance. He thinks he had rheumatism at 14 years of age when knees became swollen, red and painful, confining him to bed three months. Previous to admission patient noted his hips were becoming stiff. He left school at age of 14 years.

Examination showed male, small of stature, poorly nourished, muscles small. All visible joints enlarged. Heads of humeri were enlarged but movements not restricted. Elbows are greatly enlarged and flexion of the right is limited to a right angle; rotation of forearm is lost. The wrists were much thickened and permit only slight flexion and extension. The interphalangeal joints of all the fingers are

enlarged and fusiform; complete closure of hand not possible. Right hip is completely ankylosed and in position of partial flexion. The left permits slight motion in all directions. The knees were greatly enlarged; right permits little motion; the left is freely movable. The ankles were much enlarged and movement restricted. Interphalangeal joints of feet were enlarged.

Blood and urine examination negative.

X-ray examination of elbows shows immense enlargement of ends of bones composing them. The ends of metacarpal bones and of the phalanges are considerably enlarged and the epiphyses are not united to the shafts. The head of radius is very broad. The olecranon are of a great size. The head and neck of femur and great trochanter are immense. The texture of bone is loose at knee-joint. The ends of femur, tibia and fibula are greatly enlarged; the enlargement involves epiphyses and adjacent shaft. The epiphyses are not united to shaft. The length of the bones of the leg in correspondence to the small stature is less than usual but the bones of the arm on the contrary are longer than those of an average individual whose height is considerably greater than that of patient.

On December 2 an operation was performed by Dr. Allison with the purpose of correcting ankylosis of left hip joint. The head of femur was exposed and the articular cartilage and some of adjacent bone was removed. The end was dropped back in the acetabulum. Patient was put in a plaster cast.

The tissues removed at operation in several pieces consisted of articular head of femur and underlying bone. A study of section from this specimen shows that there is progressive proliferation of both articular and epiphyseal cartilage and bone formation occurring at edges of proliferating cartilage, but multiplication of cells fails to produce regular rows of cells characteristic of longitudinal growth of bone. Small areas of cartilage are found isolated within bone which has been formed and by proliferation this cartilage penetrates between adjacent fat cells of the marrow. Absorption of bone accompanies its new formation and osteoporosis is a conspicuous feature of disease. The bones may not be diminished in length. They may even be abnormally long.

With hypertrophic chondrodystrophy there is an uniform enlargement of ends of long bone. The growth of cartilage is excessive but produced without disorder which brings about formation of exostosis. Nevertheless, there is inclusion of aberrant cartilage within bone. No excessive bone formation occurs and there is no tendency to form exostoses. The disease is a post-fetal condition and the abnormal endochondral osteogenesis may persist through adolescence. The disease is an inborn and progressive anomaly of endochondral bone formation.

The patient was readmitted to Barnes Hospital, April 23, 1921. He is now 24 years of age. For the past year or so he has been doing the work of a carpenter. He comes to the hospital this time because of pain in his right knee. Examination shows him to be 5 feet 5½ inches tall. Weight, 123 pounds. He shows some enlargement of head of bones as described before. Right knee is in genu varus position. When patient walks he sways from side to side and slides his feet forward. There is about 20 degrees more motion in right hip in all directions than there is in the left hip. Motion of all joints is limited.

Blood and urine negative.

Wassermann, blood, negative.

X-ray examination shows that epiphyses are united. The epiphyseal ends are greatly enlarged and they show a reticular structure. They present

very much the same condition as when first observed in 1915, with the exception that epiphyses are united.

Dr. Allison did not think that there was any surgical indication for the patient at this time, so he was discharged.

C. A CASE OF ENCEPHALITIS LETHARGICA.—By LEWIS D. STEVENSON.

Male; white; age 37 years; admitted to Barnes Hospital April 11, 1921. First seen by Dr. G. G. Bragg on January 31, 1921. Was then suffering from naso-pharyngitis with temperature, pronounced nervous disturbance, severe pain in back of head and neck. In about 10 days temperature was about normal but pulse remained at 120, respiration 30. Symptoms of acute encephalitis developed, patient was lethargic and in muttering delirium, incontinence of urine and feces. A mild psychosis has persisted until the present, the chief features of which are disorientation in time, lethargy in daytime, restlessness with some hallucinosis at night.

On the 12th of April this patient presented the picture of a severe epidemic encephalitis with a psychosis and complete paralysis of the diaphragm on the left and partial paralysis on the right (demonstrated by fluoroscope). The temperature was not elevated but the pulse varied between 90 and 120. There was no facial palsy or other noticeable involvement of the cranial nerves. The reflexes were normal except for absence of abdominals. Tremor of face and hands noticeable. Atrophy of interossei marked in hands. The case is a severe type of epidemic encephalitis with lethargy, a psychosis and marked involvement of the cervical region of the spinal cord and illustrates the fact that the lesions in this disease can be widespread throughout the brain and at least the upper part of the cord.

D. GASTRIC ULCER (OPERATION, APPENDECTOMY).—By DR. BRIGGS.

E. PERIOSTEAL SARCOMA.—By DR. BRIGGS.

F. PHOSPHORUS NECROSIS.—By DR. HOUSE.

G. CASE OF ACUTE INTRACRANIAL PROCESS.—By DR. SACHS.

Patient, 8 years old, had a suppurating left ear for three years following scarlet fever. The ear suddenly stopped draining and with this the patient developed intense headaches and vomiting. There was a slight tendency to fall to left side. Reflexes in both legs abolished. High grade of double choked disc with hemorrhages. In view of the history it seemed probable that this was a brain abscess and this was confirmed by the cloudy mastoid that was seen in X-ray on the left side. Without invading the mastoid cells, the left cerebellum and left temporal lobes were explored but no abscess was found. However, a dilated ventricle was found which suggested that there was a lesion in the posterior fossa. A decompression was done on the left side. As this did not relieve the double choked disc a decompression was done on the right side a few days later. This also did not seem to help, and consequently a cerebellar exploration was done about a week later and a large glioma about the size of a small crab-apple was found lying in the fourth ventricle impinging on both cerebellar lobes. A bit of tissue was removed for diagnosis but no attempt made to remove the tumor on account of its location. Since then the patient has been treated with deep X-ray

therapy and at the end of two weeks his choked disc has completely disappeared.

H. BRONCHIECTOSIS.—By DR. GRAHAM.

2. A CASE WITH NUMEROUS RHEUMATIC NODULES.—By DR. W. McK. MARRIOTT.

This patient is a boy 14 years of age who has suffered from several attacks of acute rheumatic fever. He has chronic cardiac valvular disease and at the present time has marked symptoms of chorea and some rheumatic involvement of one wrist and ankle. He shows a much larger number of rheumatic nodules than is customarily seen. These nodules occur in the tendons and vary in size from a split pea to that of an almond. These nodules are found around the knees, tips of the spinous processes, along the flexor and extensor surfaces of the forearms and a number of large ones under the scalp in the epicranial aponeurosis. The latter might, on first glance, be mistaken for sebaceous cysts, but they are definitely adherent to the tendinous aponeurosis and do not move with the skin; they are hard and fibrous. None of these nodules is especially painful to the touch nor is there any inflammatory reaction around them. Such rheumatic nodules as these are seen only in the presence of relatively severe rheumatic fever particularly those cases which are complicated by endocarditis or pericarditis.

3. THE APPLICATION OF THE THERMIONIC VACUUM TUBE TO THE STUDY OF NERVE PHYSIOLOGY.—By DR. H. S. GASSER and DR. H. S. NEWCOMER.

A skeleton diagram of a vacuum tube circuit was presented. The circuit consisted of a two tube cascade working into a string galvanometer through a twenty microfarad condenser. The tube filaments were each connected to a six volt storage battery and the plate circuits were each made through a 200,000 ohm resistance and a 150 volt dry-cell battery. The nerve was connected by means of non-polarizable electrodes to the grid of the first tube and to the negative side of the filament. The alternating current output of the first tube was impressed upon the grid of the second tube through a two micro-farad condenser.

Records were shown of the action currents in the phrenic nerve during inspiration, made without the aid of the amplifier and with the aid of one and of two tubes. Two tubes were necessary to obtain satisfactory records.

A study was made of the manner of innervation of the diaphragm. The train of action current waves at the beginning of inspiration starts gradually and stops abruptly. An envelope of their crests is similar in shape to the well-known pneumograph tracing. In each inspiration under the conditions of the experiments there were 78 to 184 separate waves occurring at the rate of 71 to 106 per second, the higher frequency being more common.

The waves vary in size, in distance apart, and in shape. If we accept the all-or-none law the differences in size must be due to differences in the number of fibres involved. The variation in the intervals between the waves is irregular. The differences in shape are most likely due to failure of the impulse to start in all fibres simultaneously, the impulse being therefore somewhat out of phase in the several fibers.

The constituent waves in the train of action currents have the same shape as those obtained by artificial stimulation of nerve.

For every wave in the nerve action current there is a corresponding wave in the muscle action current. The waves correspond in size and in intervals of separation. These facts were demonstrated by making simultaneous records of the action currents in the phrenic nerve and diaphragm with two string galvanometers. There is a correspondence in the action currents on the two sides indicating that the manner of innervation is controlled by some point above the anterior horn cell in the cord.

DISCUSSION

Dr. Erlanger: There is only one thing that should be pointed out. Dr. Gasser has stated that amplifiers have been worked with in two or three laboratories and the work done with them has been published. The work that has been done so far, however, has merely consisted in the demonstration of the effectiveness of amplification, but the records heretofore published have been almost if not quite illegible. In the work that Dr. Gasser and Dr. Newcomer have done here, they not alone have amplified the currents, but have gotten legible records and have gone far toward solving several moot questions in physiology. They have shown, as Dr. Gasser has said, that natural action currents of nerve and muscle are not timed or spaced in the nerve or the muscle but in the central nervous system from which they come in volleys, and that the discharge is identical in the two sides.

Dr. Sachs: I would like to ask Dr. Gasser whether I understood him correctly—that his observations suggest that there is a relationship between the number of action currents and fibers, and if he has any observations on any other nerve than the phrenic nerve to indicate that there is a relationship between the number of fibers and action currents.

Dr. Gasser (closing): With regard to Dr. Sachs' question, I was merely making use of what is known as the "all-or-none" law in explanation of the facts as we found them. I have made no observations of my own on the validity of this law. Assuming that the law is valid, increase in the degree of contraction of the muscle is explained by the calling into play of more fibres. This would be mediated through additional nerve fibres. The volley would thereby increase in size and presumably also, therefore, the action currents in both the nerve and muscle would increase.

4. AN EXPERIMENTAL AND CLINICAL STUDY OF THE EFFECT OF NON-USE ON BONES.—By DR. BARNEY BROOKS and DR. NATHANIEL ALLISON.

Dogs were used for the experimental study. Three methods of preventing use of one foreleg were used.

(a) Section of the brachial plexus producing a complete sensory and motor paralysis.

(b) Excision of the proximal end of humerus producing a flail shoulder joint.

(c) Fixation of the extremity in plaster of paris.

All methods produced the same changes in the bones. The amount of change noted in the non-used bones was proportional to the degree of non-use. In adult animals the non-used bone becomes slightly smaller. There is a marked increase in the size of the marrow canal. After very long periods of non-use the compact bone of the shaft is transformed into cancellous bone. As a result of this diminution of the amount of bone tissue, there is an alteration in the permeability to the Roentgen ray, a decrease in the strength of the bone, and a marked change in the relative chemical composition of the whole bone.

If a sample of the non-used bone, however, was compared with a sample of the used bone it was found that there was no difference in the histological picture, the chemical composition, nor the strength of the bone.

The regenerative power of bone was not affected by atrophy.

The change, therefore, in bone as a result of non-use is a quantitative change and not a qualitative change.

DISCUSSION

Dr. Schwab: I should like to ask Dr. Allison and Dr. Brooks whether they think that a disease like anterior poliomyelitis, a purely peripheral condition compared with a paralysis produced by a central lesion, such as a capsullary hemorrhage, would show any difference as far as the bone is concerned. Have they any observations in reference to the condition of the bone from the standpoint of the nutritive influence of the nerve on such contrasted condition? The muscle and skin overlying the bone are subject to atrophic processes due to nutritive deficiency; how can they then exclude the bone from these same processes?

4. TUBERCULIN HYPERSENSITIVE-NESS IN NON-TUBERCULOUS GUINEA PIGS INDUCED BY INJECTION OF NATURAL TUBERCULO-PROTEIN.—By DR. FRANK A. McJUNKIN.

Guinea pigs injected with extracts of tubercle bacilli become sensitive to these extracts, but such animals are unresponsive to tuberculin (Baldwin, Austrian,*Krause). The author was unable to obtain any cutaneous hypersensitiveness with nonvirulent living tubercle bacilli (*Jour. Med. Res.*, Vol. 42).

The Koch phenomenon is due to the lysis of the tubercle bacilli injected (Kraus and Hofer). Lysis of the bacilli occurs when they are introduced into the peritoneal cavity of a tuberculous guinea pig and the author found that the exudate obtained by injecting a large quantity of living virulent tubercle bacilli into the peritoneal cavity of a tuberculous guinea pig contains a substance in solution which when separated from the bacilli and injected into a normal guinea pig sensitizes the animal to tuberculin (*J. Exp. Med.*, Vol. 33).

The substance, which when injected into normal guinea pigs renders them hypersensitive to tuberculin, may be obtained *in vitro* in solution and free from living bacilli. To accomplish this, actively growing cultures of virulent tubercle bacilli were placed in a mortar with 5 grms. glass flour, sufficient saline added to make a thick paste, and the mixture ground vigorously for three hours during a 3, 4, 24 or 48 hour period. Finally 25 or 50 c.c. saline were added, the liquid passed through a Berkfeld filter, and the filtrate injected at once into a guinea pig. Six guinea pigs injected with six different filtrates have reacted positively to tuberculin.

DISCUSSION

Dr. Opie: Experiments of Vaughn and Wheeler, Austrian and others have shown that tuberculo-protein produces anaphylactic shock in sensitized guinea pigs but it has been difficult to produce the local tuberculin reaction by the same means. Dr. McJunkin using special methods has been more successful than others in producing this local reaction.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Eightieth Meeting, May 23, 1921

1. A. AN EARLY CASE OF LUES OF STOMACH.—By DR. COPHER.

Patient admitted April 28, 1921, from O. P. D., with diagnosis of lues of stomach with pyloric obstruction.

P. H.—Three miscarriages. Husband is luetic.

P. I.—Onset 16 years ago. Symptoms of distension, vomiting, and pain accentuated since August, 1920. Lost 60 pounds in weight.

Physical Examination.—No skin rash or scars. Pupils irregular. Sluggish to L. and A. Chest examination shows P. N. impaired over right upper, inconstant rales. Systolic murmur transmitted to axilla.

Abdomen.—Visible epigastric peristaltic waves. No mass. Some rigidity and tenderness on vaginal examination; shows small uterine tumor. X-ray shows a moderate grade of stenosis with motor insufficiency from a lesion involving distal pars pylorica. Wassermann 4 plus. R. B. C., 3,500,000. Hemoglobin, 75 per cent. Given salvarsan and HgCl and K. I. Operation advised because of obstruction.

Patient transferred to surgery and operated on May 10, 1921. Tumor felt inside of pyloric lumen. No glands. Liver negative. Pylorus opened and a small tumor the size of a hazelnut found to obstruct pylorus. Pylorotomy done. Anastomosis of stomach to jejunum made according to method of Polya.

Post-operative course entirely uneventful except for an acute bronchitis which cleared up on third day. She is now receiving more anti-luetic treatment.

Spirochetes have not been demonstrated in the excised tissue as yet. Microscopical examination shows a typical luetic process. The slides have been seen by Dr. Opie.

DISCUSSION

Dr. Burrows: These are rather interesting cases, I think, and this particular type is readily differentiated from other types of so-called syphilis of the stomach. I have seen four cases of this type and every one had a positive Wassermann. The four of these had inflammatory lesions and have small focal accumulations which look like miliary gummata seen in many other parts of the body.

B. CASE OF LIGATION OF COMMON ILIAC ARTERY FOR FEMORAL ANEURYSM.—By DR. PRIEST.

Patient admitted to surgical service Barnes Hospital, May 14, 1921, complaining of lump in right groin. Out-Patient Department had made diagnosis of femoral aneurysm.

Family History.—Unimportant.

Past History.—General health good.

Present Illness.—First noticed lump about size of marble in right groin six years prior to admission to hospital. Not painful. Grew gradually larger. About one year before admission lump became painful and patient could not lie with right leg fully extended. Noticed pulsation about this time. Leg has gradually increased in size.

Physical Examination.—Well nourished, middle-aged woman, appearing somewhat nervous and apprehensive. Skin negative except for excessive perspiration. Ears, eyes, nose, negative. Teeth nearly all missing. Evidence of chronic tonsillitis and pharyngitis. The thyroid slightly enlarged with dif-

fuse pulsation. Lungs, negative. Heart, systolic shock over entire precordium, sounds loud and snapping with a presystolic rumble at apex. Cardiac outline a little large to percussion. Blood pressure, 148/90. Abdomen, negative. Upper extremities, negative; lower extremities: over anterior surface of right thigh just below Poupart's ligament is an expansile tumor, size of large orange. It is non-reducible and does not change in size with elevation of the leg. Marked systolic thrill and systolic bruit and in one area faint diastolic bruit. Definite enlargement of right thigh and leg with pitting on pressure. Blood pressure in left leg, 145/90. Blood pressure in right leg, 108/(?). Sensory examination showed hypalgesia to pin prick and anesthesia to cotton-wool on medial surface of right thigh. Chronaxia determinations in both legs showed nothing abnormal. Tracings of the pulse waves in either leg showed a broadening of the tracing from the right leg and a delay in rise of ascending limb of .02 to .03 second.

Blood Wassermann, negative.

Urine showed faint trace albumin but no casts.

E. K. G. showed left ventricular preponderance. Dr. Barney Brooks considered the aneurysm of fusiform type involving the distal part of external iliac and proximal part of femoral artery, the walls apparently unruptured.

May 10, 1921, Dr. Brooks performed laparotomy and ligated the right common iliac artery which was greatly increased in size. Two heavy, braided silk ligatures were used. Patient stood operation well. Immediately after operation no pulsation was felt in tumor, but before patient left operating room a very small but distinct pulsation could be felt.

Convalescence was uneventful. The pulsation increased for a time but not to the pre-operative force. On the fourth day the pulsation began to get noticeably less and the tumor firmed. Right leg gradually decreased in size but did not reach that of the left. Patient discharged on fourteenth post-operative day with moderate pulsation still present, but with complete absence of subjective symptoms. The sensory disturbances in right thigh had cleared up and there was no evidence of gangrene or any circulatory disturbance in right extremity.

C. CASE OF DIABETES INSIPIDUS SUCCESSFULLY TREATED BY PITUITARY EXTRACT.—By MR. REECE.

Patient admitted on surgery service and one week later transferred to metabolism ward. Patient came in complaining of excessive thirst, frequency of urination, diarrhea and constant headache.

Family History.—Unimportant.

Past History.—Patient had gonorrhea and chancreoid (?) fourteen years ago. No treatment. Nine years ago patient began an excessive indulgence in alcohol which he continued for several years.

Present Illness.—The onset, two years ago, was quite abrupt; first noticed that he was drinking large amounts of water and that he had to urinate frequently. Within a month after the onset was voiding large quantities of clear urine about every thirty minutes, day and night. The daily output found to be from twenty to twenty-four quarts. Condition remained practically constant for the past two years. He has had almost constant headache, very easily fatigued, dizzy spells and memory impaired; troubled with diarrhea.

Physical Examination.—Negative.

Neurological Examination.—Mental condition normal. Judgment and memory good. No speech defects. No pathological reflexes.

Laboratory and Special Examinations:

Blood findings normal.

Wassermanns negative.

Spinal fluid Wassermann negative.

Urine normal except for low specific gravity: 1001-1002 on admission.

P. S. P. showed a return of 75 per cent. of the dye in two hours.

Ophthalmoscopic examination showed normal discs; the visual fields were normal.

A gastric fractional analysis showed a normal acid curve.

Stereoscopic plates of the skull showed no definite abnormalities.

Blood pressure on admission was 110/65.

Progress in Hospital.—When patient was first admitted to metabolism ward his fluid intake and output ranged between twelve to fifteen liters per 24 hours. Patient first asked to reduce his intake so far as he could with reasonable comfort. Seven liters was his minimum. Adrenalin by mouth and by duodenal tube was tried but gave no relief.

The patient was put on desiccated pituitary extract, posterior lobe, by mouth, half grain doses, t. i. d., gradually increased to two grain doses four times per day. In the latter treatment the polydipsia and polyuria were readily brought under control.

The effect of intramuscular injection of pituitary liquid was tried. Two injections of 1 c.c. each were effective, providing the second injection was given late in the evening. Giving desiccated extract in powder form by mouth and rectum gave no effect. The powder was also tried with no result.

The results obtained in this case by the use of pituitary substance in salol-coated capsules suggests the possibility that at least some cases of diabetes insipidus may be successfully treated by giving the desiccated substance by mouth.

DISCUSSION

Dr. Sachs: I would like to ask what pituitary extract was used—if the whole gland was used?

Dr. Marshall: There were a number of cases of diabetes insipidus reported by Rountree in Chicago last year. They had very carefully tried all the various drugs which were proposed in this condition, and found that the pituitary extract was the only thing which would keep down the polyuria. It is very interesting in this case that they were able to control the polyuria by mouth. That, I don't believe, has been the case in previous experiments. The use of salol to prevent the decomposition in the stomach may have had something to do with that. The cases reported in Chicago showed that the condition is unquestionably not one of deranged absorption in the intestine, but a true disturbance of the kidney. In certain cases where pituitary extract was given to cut down the polyuria, water was forced, and the patients immediately developed a profound edema.

2. THE ETIOLOGY AND TREATMENT OF AMMONIA DERMATITIS OF THE GLUTEAL REGION OF INFANTS.— By DR. J. W. COOKE.

The common erythematous or papulo-vesicular dermatitis of the gluteal region in infants is caused by ammonia in the diaper and should be classed with other forms of dermatitis venenata. A similar dermatitis may occur in older children who have enuresis, and this also is associated with the presence of ammonia in the clothing or bedding wet with urine.

In both infants and older children with this affection, a characteristic Gram positive bacillus has been isolated from the stools in every case exam-

ined. This organism is a saprophyte, but has the property of fermenting urea with the production of ammonia.

In a series of infants without ammonia formation in the diapers this organism can be found relatively infrequently; in older children, however, its occurrence is not unusual.

The use of diapers impregnated with an antiseptic, such as mercuric chloride, causes a prompt disappearance of the ammoniacal odor and a rapid regression of the skin lesions.

The evidence presented indicates that "the ammoniacal diaper" and the dermatitis that accompanies ammoniacal urines are dependent on bacterial fermentation of urea. The micro-organism concerned is apparently the same in all cases and infests the diaper from the feces. This infestation can be readily suppressed and the ammoniacal fermentation eliminated by the use of antiseptics in the diaper. With the cause thus removed the dermatitis rapidly disappears.

DISCUSSION

Dr. Hempelmann: Dr. Cooke's work is a very valuable contribution on a very troublesome subject. Children with this complaint are fretful, sleep poorly and cry easily, and the mother becomes worried, frequently not suspecting the cause of the trouble. The lesions at times consist of such large blisters as to arouse the suspicion of pemphigus, bullous impetigo or some other very serious ailment. I can testify to the efficacy of the treatment which Dr. Cooke has devised because one or two nights after the application of the antiseptic diaper all the ammonia odor disappears and the child sleeps soundly all night. I am sure he has earned the gratitude of pediatricians all over the country. Other measures up to the present have been of very little service even though alterations in diet may occasionally improve matters in milder cases.

Dr. Cooke: In some cases the treatment must be continued until the child can be trained so that the diaper is no longer necessary. This can usually be done by the end of the first year and is the surest way to overcome the difficulty. One cannot predict how long the treatment will be necessary. In some cases the formation of ammonia returns when the antiseptic is discontinued after a few weeks, while in others it does not.

3. BLOOD SUGAR CURVES AFTER MEALS.—By Drs. WM. H. OLMSTED and L. P. GAY.

Over two hundred cases studied in the hospital of many different diagnoses.

The importance of the technic of administration of glucose meal was pointed out, also blood sugar curves in the following condition were shown: hyperthyroidism, hypothyroidism, mild diabetes, renal diabetes, Addison's disease, hysteria, manic depressive insanity, etc.

The conclusions were that there were a very large number of factors influencing blood sugar curves, so much so that high curves have very little significance unless the endocrin, neurological and the general medical condition of the patient were known and considered.

DISCUSSION

Dr. Schwab: I think that one of the most important features of this work of Dr. Olmstead's is its application to neurological problems. In a paper read at a previous meeting I attempted to point out this importance and submitted certain observations from the blood sugar values of certain cases of psychoses and neuroses. The substitution of the

term blood sugar value and blood sugar curve for that of hyperglycemia is valuable. In the work done by Dr. Jones and myself an attempt was made to find out if we could use these curves in helping us diagnose cases and further to utilize them as a measure of progress or lack of progress that was made while patients were in the hospital. An attempt also was made to give some sort of an explanation to account for the higher curves in certain of our cases. The type of curve that particularly interested us was not the precox group but in the groups showing anxiety; that is, the anxiety neuroses. These patients came to the hospital in a state of depression and anxiety without any definite knowledge as to cause. Such cases showed a very high sugar value. As the patient became aware and became conscious of the hidden origins of his fear the blood sugar curves approached more nearly normal. These observations are in line with those made by previous investigators on the question of the role of the primary instincts in the causation of psychoses. Epilepsy cannot be used because of the attacks themselves causing disturbances in blood sugar values. I might add as an interesting bit of observation that we have now in the hospital a case with a very marked subjective sensation of sweetness, almost amounting to a hallucination of taste. This patient has one of the highest blood sugar curves that we have so far seen. This is an interesting observation but one that cannot be used in any attempt to explain the blood sugar values in this type of case.

Dr. Stevenson: I might say that we have found a good deal of difference in working with spinal fluid when we use different methods for determining the amount of sugar in it. Dr. Shaffer's method always gave the lowest figure—10 to 15 per cent. lower than Benedict's method, and still lower than Folin's method. It seems to be the most accurate method because the other two seem to give results with other reducing substances which are not sugar. We found in 27 cases of different neurological diseases the average amount of sugar in the spinal fluid was between 60 and 70 mg. in 100 c.c. With Folin's method, the results in similar cases were as high as 98 mg., the average being 79 mg. The method used for determination of sugar is therefore a very important part of the technique.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its "Armistice Meeting" in the Snapp Hotel, Excelsior Springs, November 8, 1921. This has been pronounced by many as the most substantial meeting in the society's history as well as one of the most enjoyable.

A noon dinner in the spacious dining room of one of our finest hotels, set the proceedings in motion. Forty-three persons were seated at the table, being members and their wives. An address of welcome by our faithful president, Dr. E. L. Parker, put everyone in touch with our spirit of progress. A resolution of thanks to the Snapp Hotel management for courteous treatment was introduced by Dr. W. S. Wallace and adopted unanimously. The entire main floor of the splendid hotel was at our disposal.

After dinner a local committee of our ladies assembled to the number of twenty, for a party at the theater, thus making every moment an interesting one for the Doctor's faithful "better half." Who can be nearer to the heart of the medical society than the medical society's wife?

Our scientific session was opened with a reading of our constitution and by-laws, which were up for revision. It may be well to say that our constitution, adopted in 1854, has been preserved untarnished and it is still the flag under which we love to march.

The society recommended Dr. Spence Redman, our Councilor, as a member to attend the state constitutional convention, and the secretary was directed to notify other societies of this district of our action.

Dr. E. C. Robichaux read a paper on "Multiple Abscesses of the Liver," wherein he reported a case in the minutest detail and the results of the autopsy. A discussion of this valuable paper brought out many expressions of its approval as being one of the best papers of the year.

Dr. C. H. Suddarth read a paper on "Some Observations on the Prostatic Urethra," based on the Doctor's extensive experience and coupled with his exhaustive investigation of the subject. This paper was thoroughly discussed and highly complimented. A request was made that both papers be submitted to THE JOURNAL.

Dr. E. C. Hill paused in his discussion of the papers to express on behalf of our out-of-town guests, the hearty appreciation of our visitors. Our fraternal spirit has never been better.

Next meeting in Liberty, December 26.

J. J. GAINES, M.D., Secretary.

DAVIESS COUNTY MEDICAL SOCIETY

The Daviess County Medical Society met at Pattonsburg, at the residence of Dr. J. D. Dunham, Tuesday evening, October 11, 1921, with the following present: Dr. Ragan of Moberly, Drs. Dunham, Smith, Cooper, Parker, Hedges, Doolin, Campbell and Wetzel.

Dr. Ragan was the principal speaker of the evening and gave a splendid address on syphilis, its diagnosis and treatment, and stated that a large majority of cases in his opinion can be cured if taken in time. His address was scientific and practical and enjoyed very much. Dr. Ragan was in the army service and had an opportunity to study these cases and see the results of the treatment.

The medical profession is always glad to know when we have gained another point in the science of medicine in finding a new treatment that we know will bring about a cure if properly given.

Dr. Wetzel read a paper on "Medicine as a Business" which brought about a lengthy discussion. Following the paper he presented a clinic of considerable interest.

The next meeting will be held at Gallatin in January, 1922.

After the adjournment Mrs. Dunham served the doctors with delicious refreshments.

N. M. WETZEL, M.D., Reporter.

JASPER COUNTY MEDICAL SOCIETY

The 24th regular meeting of the Jasper County Medical Society of the year 1921 was held Tuesday evening, October 18, at the Y. M. C. A., Joplin, the president, Dr. S. A. Grantham, in the chair.

Dr. Stormont read a most interesting paper on "Raynaud's Disease," with the report of a case that responded to treatment of rest, bromides and adrenalin chloride.

An amendment to the constitution providing for the increase in annual dues to eight dollars was adopted.

Attendance twenty-four.

Meeting of October 25, 1921

The 25th meeting of the Jasper County Medical Society for the year 1921 was held October 25, at the Y. M. C. A., Joplin, the president, Dr. S. A. Grantham, in the chair.

Dr. Tyree read a paper on "Chronic Constipation," which was illustrated with a number of X-ray plates depicting various intestinal abnormalities that cause

constipation. The paper was discussed by Drs. Clark, Williams, Morgan, LaForce, Miller, Pifer, Neff, Grantham and Clinton.

Attendance twenty-four.

JAS. J. TYREE, M.D., Secretary.

ST. FRANCOIS COUNTY MEDICAL SOCIETY

At the call of the president, the St. Francois County Medical Society held a meeting in October with the following members present: Dr. G. E. Cecil, President, Drs. Keith, Topping, Haney and Elder. While there was no regular program, various topics were discussed and a very enjoyable session was held. The society intends to hold regular meetings in the future whether or not there is a quorum present. "Where there are two or three gathered in My name, there I will be also."

G. E. CECIL, M.D., Secretary.

BOOK REVIEWS

PRACTICAL TUBERCULOSIS. By Herbert F. Gammons, M.D., Superintendent Woodlawn Sanatorium, Dallas, Texas; Assistant Instructor in Clinical Medicine, Baylor Medical College, Dallas, Texas; Formerly Resident Physician, Cullis Consumptives' Home, Dorehester, Mass.; Assistant Physician, Massachusetts State Sanatorium, Rutland, Mass., etc. Introduced by J. B. McKnight, M.D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium, Carlsbad, Texas. St. Louis: Mosby. 1921. Price, \$2.00.

The title is an apt one, for the little volume while brief is a fairly complete résumé of present day knowledge of pulmonary tuberculosis. The style is simple and the language as nearly non-technical as could be. In fact the reader, in perusing some chapters, is led to question whether the book was written for the use of the medical profession or for laymen. However, the author has not sacrificed essential subject matter for the sake of simplicity. His views on the methods and the importance of early diagnosis are up-to-date, safe and sane. His suggestions regarding treatment are very brief but are essential and practical. This is a book which should be in the hands of every general practitioner. S. H. S.

STUDIES IN DEFICIENCY DISEASE. By Robert McCarrison, M.D., D.Sc., Hon. LL.D. (Bef.) Fellow of the Royal College of Physicians, London, etc. Henry Frowde and Hodder & Stoughton, The Lancet Bldg., London. Oxford Medical Publications. Price, \$10.00.

"The aim of this book is to present the reader with a consecutive account of the results of recent experimental researches into the nature of Deficiency Diseases, and to point out the application of these results to their prevention."

In the introduction, objection is made to the term vitamins, as these substances are not amines: he suggests that the "e" be dropped and the accessory food factors be called vitamins to conform to the nomenclature of the Chemical Society.

McCollum's division of vitamins (A. B. & C.) is adopted throughout the book, but no attempt has been made to study the nature of these substances. The source of vitamins in the common food substances and their chemical properties are summarized in the introductory chapter.

The principal part of the book is devoted to a description of a large number of experiments with pigeons, guinea-pigs and monkeys, who were fed

milled rice for a long period, raw, cooked and autoclaved. Butter and onion was added to the autoclaved rice in some experiments.

The author clearly warns that in judging the results of these depletion periods of feeding, other factors which influence the onset of morbid states must be considered. The predisposing causes of instinct, appetite, race, congregation, cold, heat, rest, activity and lack of balance in the food play an important role. Especially must the previous nutritive condition of the animal be considered. Infection may simulate the deficiency disease or increase the pathological changes in the body.

The work is noteworthy on account of the extensive study of morbid anatomy in animals suffering from deficiency disease. One is surprised at some of the findings.

A general atrophy would be expected as in starvation, but actual degeneration of nerve and glandular tissue shows that more is at work than starvation. The bacterial factors cannot, however, be excluded, and intestinal intoxications may cause the profound changes in the gastroenteric tract secondary to the deficiency disease.

The book is a most valuable contribution to the study of vitamins. The translation of these experimental conclusions to practical medicine must, however, be carefully and tentatively undertaken. J. Z.

MORRIS' HUMAN ANATOMY. A Complete Systematic Treatise by English and American Authors. Edited by C. M. Jackson, M.S., M.D., Professor and Director of The Department of Anatomy, University of Minnesota. Eleven Hundred and Sixty-Four Illustrations, Five Hundred and Fifteen Printed in Colors. Sixth Edition, Revised and Largely Rewritten. Publishers: P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. Price, \$10.00.

Missourians should be greatly interested in this edition of Morris' Anatomy because of the thirteen contributors five of them are from this vicinity. Jackson himself was formerly with the University of Missouri; Eycleshymer was formerly of St. Louis University; Terry is now at Washington University at St. Louis; while Scammon is a product of the University of Kansas; Clark is now of the University of Missouri. In other words, the book is essentially an American book, and from the mid-western section of the United States. Schaeffer is from Jefferson Medical College of Philadelphia, and Senior is from the University and Bellevue Hospital Medical College of New York. Smith is from London, and Stockard from Cornell. Otherwise, the universities represented are, Wisconsin, Missouri, Illinois, Tulane, Minnesota, Rush, and Washington.

To the reviewer, the most interesting thing in this edition is the attempt to combine the newer scientific developments in pathology and physiology with the old objective statements of anatomical form, for it is one of the most difficult things to teach a beginner in medicine the elementary facts which are evident to the senses only when those senses are supported by some artificial means of study, such as the microscope. Naturally, the book will be of most value to the students of the standard medical schools which require two years of preliminary scientific work in a college.

As a work of reference for graduate physicians it is, perhaps, a little too condensed to furnish the details that one is apt to require when puzzled by some actual case.

For its chief purpose however, that of furnishing a text book for the students of the type of state university medical schools represented by its editors, we can only commend it, and that in high terms.

G. H. H.

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